DEPARTMENT OF THE INTERIOR U.S GEOLOGICAL SURVEY

Geotechnical Drill-Hole Logs from the Southern Seattle Area, Washington

by

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Open-File Report 90-90

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ABSTRACT

One hundred sixty-four geotechnical logs are presented from drill-holes in the southern Seattle area of Washington. The logs are from a number of county and municipal sources and the original drill-hole information appeared in a number of different formats. This compilation brings into a common format lithologic descriptions, textural information, and standard penetration data from these varied sources. Water level information, water content data, and measures of Atterberg limits are presented where that information was available in the original logs. All information presented in this report was derived from previous investigations. No new information is presented that is not already available in public-domain records.

INTRODUCTION

Purpose of Report

A companion report (Yount and others, in press) discusses liquefaction potential in the southern Seattle area and makes use of the standard penetration data derived from these 164 geotechnical wells. These data were derived from numerous sources over the years 1979-1982, and the formats of the original data were varied. The purpose of this report is to collect and present this geotechnical drill-hole data in a common format as a source for the summary plots given in Yount and others, in press. The drill-holes illustrated here represent only a small portion of the total number of drill-holes available from the sources consulted. Drill-hole selection was influenced by a need to obtain data from each of the major stratigraphic units in the southern Seattle area, as well as a desire to get observations from all parts of the study area. Where a number of drill-holes existed in a particular area, the deepest or most stratigraphically complete record was selected.

Nature and Sources of Data

Unless otherwise noted on the log, holes were rotary drilled and the standard penetration tests were performed with a 140 lb. weight dropped 30 in. using a 2 in. outside diameter split-spoon sampler. Drill-hole data were derived from the following sources: bridges and highway construction from the Washington State Division of Highways, Lacey, Washington; City of Seattle municipal sewer borings from the Seattle City Engineering Department; downtown high-rise buildings and Kingdome investigations from the Seattle City Engineering Department and the King County Building Inspection Department.

We would like to thank Al Kilian and LeRoy Wilson of the Washington State Department of Transportation Materials Testing Laboratory for their help in locating drill-hole information. Barry Lipnick of the Seattle Engineering Department and Charles Fulmer of the King County Planning Department provided a great deal of help in gaining access to valuable geotechnical information. Terry Olmstead of Shannon and Wilson, Inc. and Dennis Stettler of Hart Crowser and Associates, Inc. suggested sources of subsurface information.

FORMAT OF GEOTECHNICAL LOGS

Photocopies or personal notes made from the original logs at each of the data sources were redrafted to a common format (see Appendix). The location of each drill-hole contained in the Appendix is shown on Plate 1. Standard penetration values, in blows per foot, are listed alongside a written description of lithology and a graphic portrayal of texture down each drill-hole. Water levels, water contents, and Atterberg limits are listed for those logs that contained such data in the original descriptions. The water level data include date of observation and notation of possible perched conditions when that information was contained in the original log. Water content and Atterberg limits exist for drill-holes 79030, 79033 through 79043, and 82012 (No Atterberg limits for drill-holes 79033 and 79041). Water content is expressed as weight percent water relative to the weight percent of solid material. Atterberg limits represent the water content at the liquid limit and plastic limit, respectively,

for a given sample. On the logs these limits are, again, expressed as weight percent water relative to weight percent solid with the smaller water content expressing the liquid limit and the larger water content expressing the plastic limit.

Relationship of Quaternary Stratigraphy to Units Shown on Logs

The Quaternary sediments overlying bedrock in the southern Seattle area consist of relatively flat-lying interbedded glacial and nonglacial deposits (fig. 1). The older portion of the Quaternary section penetrated by the drill-holes shown in this report contains at least three nonglacial and two glacial sequences of deposits. The oldest nonglacial deposits are made up of moderately consolidated fluvial sand, silt, clay and minor gravel. The oldest glacial unit, the Beacon Hill Till (Stark and Mullineaux, 1950) is a compact clayey till with well-rounded cobbles and pebbles. Interposed between the Beacon Hill Till and the next overlying glacial unit is a sequence of nonglacial fluvial and lacustrine sand, silt, clay, gravel and peat known as the Duwamish Formation (Stark and Mullineaux, 1950). The glacial unit atop the Duwamish Formation is the Klinker Till (Stark and Mullineaux, 1950), a unit lithologically similar to the Beacon Hill Till. Fluvial and lacustrine sediments, similar in lithology to the Duwamish Formation make up the sequence of Olympia nonglacial sediments that overlie the Klinker Till.

Sediments, collectively termed Vashon Drift, representing the last major advance and retreat of ice into Puget Sound commonly overlie the sequence of older glacial and nonglacial sediments throughout the southern Seattle area. The proglacial-lacustrine Lawton Clay and proglacial-fluvial or lacustrine Esperance Sand sequence of Mullineaux and others (1965) usually grades upward to coarse-grained, gravelly outwash deposits that were accumulating in front of the advancing icesheet. The Vashon Till overlies the advance outwash complex and consists of very compact clayey to sandy till containing abundant cobbles and boulders. Recessional outwash deposits overlying the Vashon Till generally consist of poorly sorted gravelly sands.

Holocene alluvium and estuarine deposits and historic artificial fill make up the youngest sediment types that have accumulated in the southern Seattle area.

Grouping of the Quaternary sediments into stratigraphic classes for purposes of liquefaction susceptibility studies followed the following scheme:

Bedrock

All Pre-Vashon Nonglacial Deposits = Qn

All Pre-Vashon Glacial Deposits = Qg

Vashon Advance Outwash Deposits, including Lawton Clay and Esperance Sand = Qva

Vashon Till = Qvt

Vashon Recessional Deposits = Qvr

Holocene Alluvium and Estuarine Deposits = Qal

Artificial Fill = af

These designators are indicated in the written description of lithology given in each log.

REFERENCES

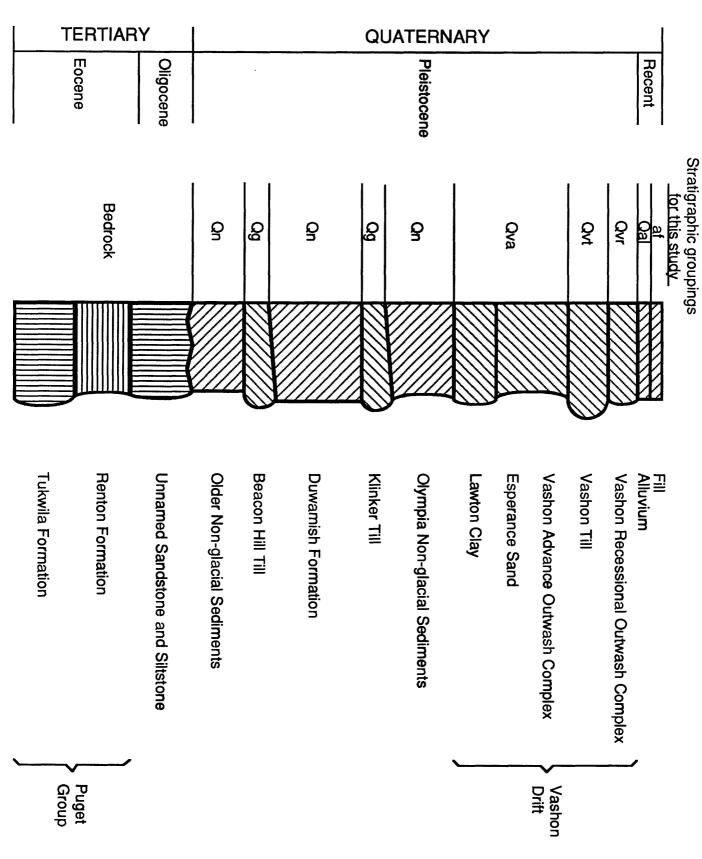
- Mullineaux, D.R., Waldron, H.H., and Rubin, Meyer, 1965, Stratigraphy and chronology of late interglacial and early Vashon glacial time in the Seattle area, Washington: U.S. Geological Survey Bulletin 1194-O, 10 p.
- Stark, W.J., and Mullineaux, D.D., 1950, The glacial geology of the city of Seattle: M.S. Thesis, University of Washington, Seattle, Washington, 88 p.
- Yount, J.C., Vick, G.S., and McCoy, Gail, in press, The Standard Penetration Versus Depth Relations of Quaternary Glacial and Nonglacial Deposits in the Southern Seattle Area, Washington:

 Implications for Studies of Liquefaction Susceptibility: U.S. Geological Survey Open-File Report.

APPENDIX

GEOTECHNICAL DRILL-HOLE LOGS

GENERALIZED STRATIGRAPHIC SECTION, SOUTHERN SEATTLE AREA

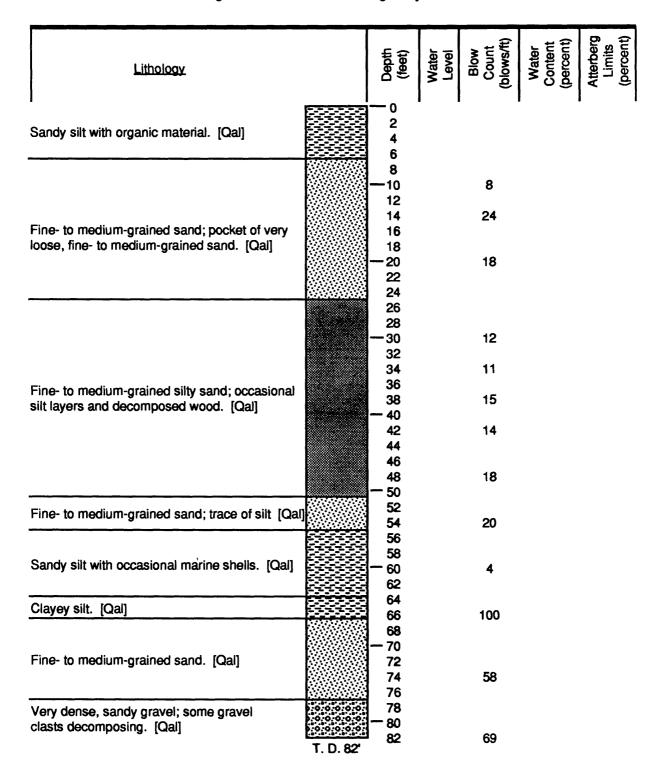


PATTERNS FOR TEXTURAL CLASSES PORTRAYED ON GEOTECHNICAL LOGS

Peat	
Clay	
Silt	
Fine-grained sand	100
Medium-grained sand	
Coarse-grained sand	
Gravel	
Till	

SITE: West Marginal Way Cutoff, test #13.

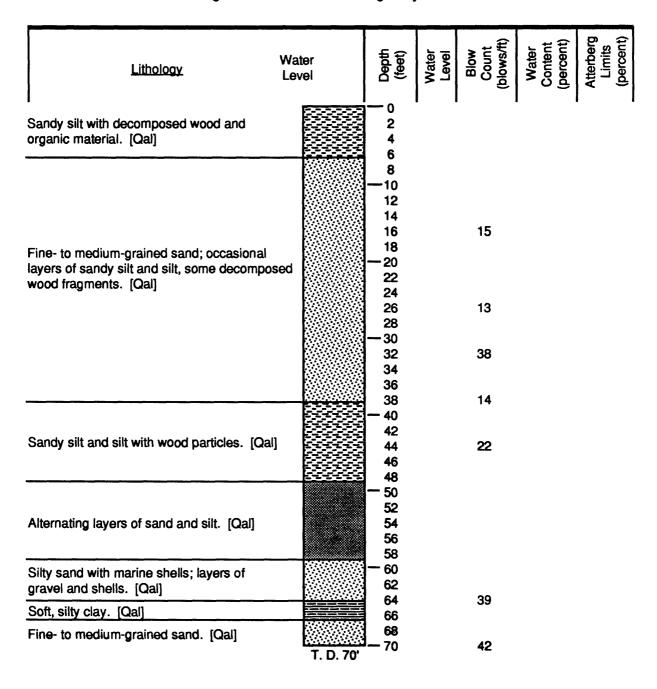
GROUND ELEVATION: 4.9'



SITE: West Marginal Way Cutoff, Test # 14.

GROUND ELEVATION: 5.3'

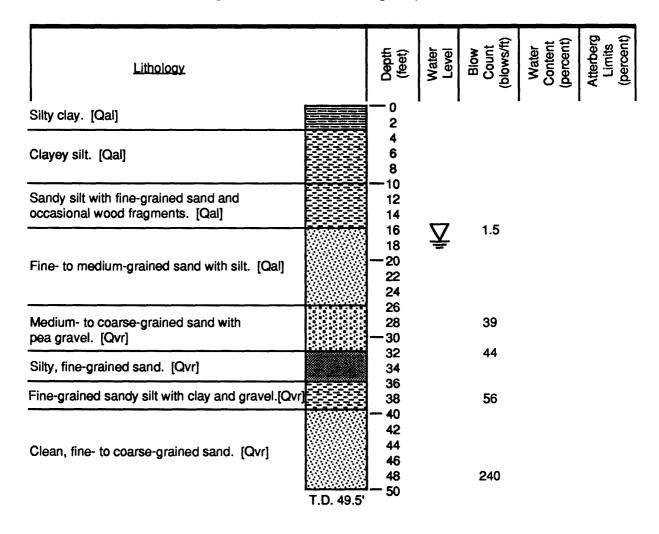
INVESTIGATOR: Washington State Division of Highways.



10

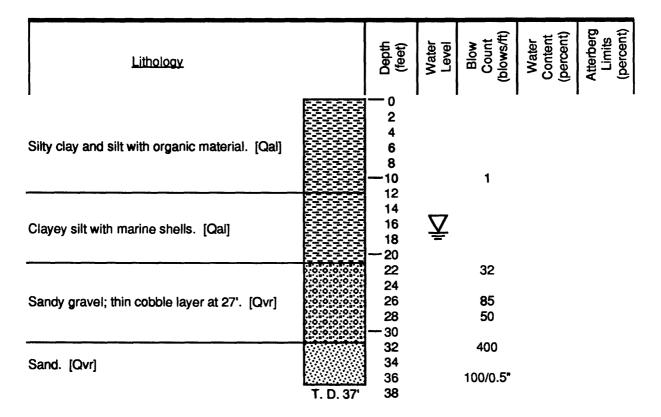
SITE: West Marginal Way and 14th Avenue Intersection, test #9.

GROUND ELEVATION: 4.8'



SITE: West Marginal Way and 14th Avenue Intersection, Test #10.

GROUND ELEVATION: 5.4'



SITE: West Marginal Way and 14th Street Intersection, Test #12. GROUND ELEVATION: 5.0'

Lithology		Depth (feet)	Water Level	Blow Count (blows/ft)	Water Content (percent)	Atterberg Limits (percent)
Silty clay. [Qal]		— 0 2 4	•			•
Sandy silt. [Qal]		6 8 —10 12				
Fine- to medium-grained sand. [Qal]	********	14				
Silty clay with marine shells. [Qal]		16 18 20 22 24	abla	0		
Fine-grained sand and pea gravel. [Qvr]	0.0.0.0.0.0.0	26		10		
Silty fine-grained sand. [Qvr]		28 30 32		24		
Fine- to medium-grained sand. [Qvr]		34 36 38 40		53		
Silty sand and gravel. [Qvr]	7. D. 44	42 44		90		

SITE: I-5 and Spokane Street Intersection, CY-1. GROUND ELEVATION: 76'

<u>Lithology</u>		Depth (feet)	Water Level	Blow Count (blows/ft)	Water Content (percent)	Atterberg Limits (percent)
Silty organic clay; sand layers. [Qva]		- 0 2 4 6 8 -10		12 8		
Interbedded, slity sand and clayey silt; some fine-grained sand and gravel. [Qva]		12 14		10		
Silty clay; layers of fine-grained sand, pea gravel, and organic material. [Qva]		16 18 20		7		
Fine-grained sand; small clay pockets. [Qva]		22 24 26		11		
		28 30		9		
Silty clay; traces of organic material. [Qva]		32 34		11		
Silt; fine-grained sand layers. [Qva]		36 38		16		
Silt to medium-grained sand; clay pockets. [Qva]	40 42 44		16		
Silty clay; some sand and pea gravel. [Qva]		46 48		31		
		50 52 54 56 58		24 26		
Silty clay and clay; pockets of fine-grained		- 60 62 64 66 68		36 27		
sand and silt. [Qva]		70 72 74		26		
		76 78 — 80		32		
		82 84		27		
		86 88 — 90		31		
conti	nued on nex	t page				

NUMBER: 79006 (cont.)

SITE:

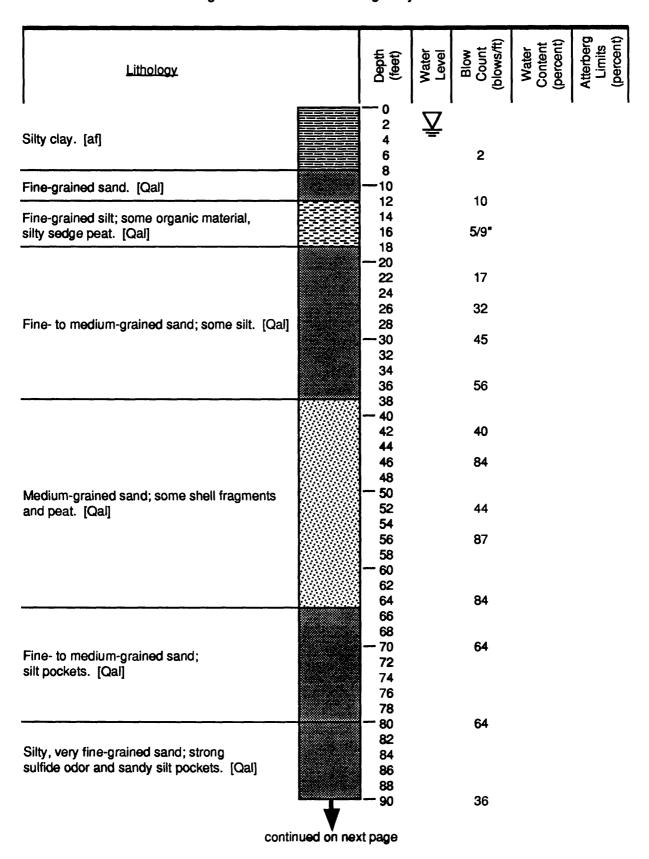
GROUND ELEVATION:

INVESTIGATOR:

Lithology		Depth (feet)	Water Level	Blow Count (blows/ft)	Water Content (percent)	Atterberg Limits (percent)
see previous page		90 92 94 96 98		32 38		
Clay; peat layers and many silt and fine- grained sand layers. [Qn]		100 102 104 106 108 110		40		
Medium- to fine-grained sand. [Qn]		110 112 114 116		103		
Fine-grained sand to clay; shells. [Qn]		118				
Clay; sand and silt lenses. [Qn]	T.D. 130'	-120 122 124 126 128 -130		43 45		

SITE: I-5 and Spokane Street Intersection, SA-22

GROUND ELEVATION: 10.08'

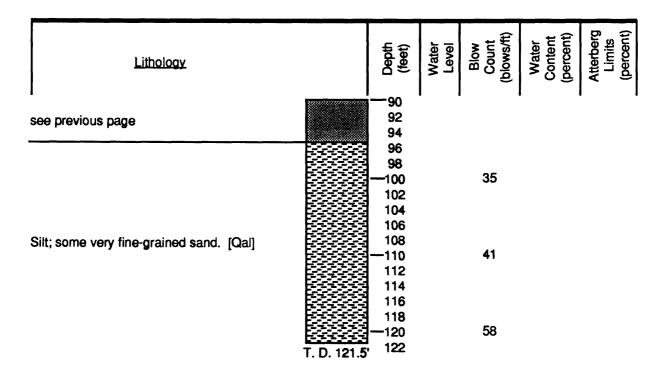


NUMBER: 79007 (cont.)

SITE:

GROUND ELEVATION:

INVESTIGATOR:



SITE: I-5 and Spokane Street Intersection, CY-6. GROUND ELEVATION: 123.2'

Lithology		Depth (feet)	Water Level	Blow Count (blows/ft)	Water Content (percent)	Atterberg Limits (percent)
Silt; some pea gravel. [Qva]		— 0 2 4		55		
Clay; silt and sand pockets and occasional pebbles. [Qva]		6 8		58		
Silt. [Qva]		—10 12 14		110		
		16 18 20		37		
		22 24		37		
Silty clay; silt pockets. [Qva]		26 28 —30		32		
		32 34 36		32		
		38 — 40		32		
Clayey silt; silt pockets. [Qva]		42 44 46		35		
		48 — 50		37		
Silty clay; silt pockets and lenses. [Qva]		52 54 56		34		
		58 60 62		53		
Silt. [Qva]		64 66		65		
Silty clay; silt pockets. [Qva]		68 70 72		85		
		74 76		44		
Clayey silt to silt. [Qva]		78 80 82		4 4		
		84 86 88		57		
	★	90		51		
con	tinued on ne	kt page				

NUMBER: **79008 (cont.)** SITE:

GROUND ELEVATION:

INVESTIGATOR:

·		Water Level	Blow Count (blows/ft)	Water Content (percent)	Atterberg Limits (percent)
	-90 · 92 · 94 · 96 · 98 ·-100 · 102 · 104		55 39 49		
Gravel and occasional large pebbles; sand	106 108 -110		92/9"		
Silt. [Qn]	112 114		61		
Silty clay; sand pockets and silt lenses. [Qn]	116 118 -120 122 124		49 35		
_	126 128 -130 132		30		
Clayey silt; small clay pockets and occasional pea gravel. [Qn]	134 136		41 33		
	138 -140 142 144		36		

SITE: I-5 and Spokane Street Intersection, SA-29. GROUND ELEVATION: 177.6'

Lithology		Depth (feet)	Water Level	Blow Count (blows/ft)	Water Content (percent)	Atterberg Limits (percent)
Gravelly silty sand; clay pockets. [Qva]		0 2 4 6 8		- 24 50		
Gravelly medium- to coarse-grained sand. [Qva]		—10 12 14 16		50 129 54		
Sandy clay; some pea gravel. [Qva]		18 20				
Coarse- to medium-grained sand; pea		22 24		119		
gravel. [Qva] Silt. [Qva]		26 28 30 32		71		
		34		116		
		36 38 — 40		88		
Fine-grained sand. [Qva]		42		59		
• •		44 46		118/6"		
		48 50 52		51		
Cemented sandy silt and pea gravel. [Qg]	00000	52 54				
		56 58 60		44		
Clayey silt; some sand and pea gravel. [Qg]		62 64 66 68 70		48		
	00000	72 74		102		
Clayey silt; silt pockets and pea gravel. [Qn]		76 78 80 82		80		
		84 86		76		
see next page.		88 90		118		
cont	▼ in ued on ne x	t page				

NUMBER: 79009 (cont.)

SITE:

GROUND ELEVATION:

INVESTIGATOR:

Lithology		Depth (feet)	Water Level	Blow Count (blows/ft)	Water Content (percent)	Atterberg Limits (percent)
Silt and clayey silt; silt pockets. [Qn]		90 92 94 96 98	•	148/10" 121		
Clay and silty clay; silt pockets. [Qn]	T. D. 108.5	-100 102 104 106 108		59 44		

SITE: I-5, just North of Boeing Cutoff, HQ5. GROUND ELEVATION: 8.0'

Lithology		Depth (feet)	Water Level	Blow Count (blows/ft)	Water Content (percent)	Atterberg Limits (percent)
Silt. [Qal]		— 0 2 4 6	•	10		
		8 10 12 14		16		
Fine- to medium-grained sand; silt seams. [Qal]		16 18 —20		12		
		22 24 26 28		17 27		
Medium-grained sand; peat and wood fragments. [Qal]		-30 32 34		12		
Fine-grained sand; trace of silt	2.45 2.45 2.45	36 38 40 42		23		
and wood fragments. [Qal]		44 46 48		35 28		
Silt; organic material. [Qal]		50 52 54 56		20		
ont, organic material. [Qai]		58 60 62 64		4		
	T. D. 65'	,				

SITE: I-5, just north of Boeing Cutoff, HQ6.
GROUND ELEVATION: 8.0'
INVESTIGATOR: Washington State Division of Highways.

Lithology		Depth (feet)	Water Level	Blow Count (blows/ft)	Water Content (percent)	Atterberg Limits (percent)
Clayey silt. [Qal]		— 0 2 4				
Silty fine-grained sand. [Qal]		6 8		25		
Medium- to coarse-grained sand; wood fragments and trace of silt. [Qal]		—10 12 14		10		
		16 18 —20		26		
		22 24		28		
Silty fine-grained sand; silt seams and		26 28 30		16		
trace of gravel. [Qal]		32 34		32		
	Since	36 38 — 40		34		
	:2222	42 44 46		46		
Silt; organic material. [Qal]		48 50				
Silty fine-grained sand. [Qal]		52 54				
Silly amonic metasics. [Oal]		56 58				
Silt; organic material. [Qal]		60 62 64		6		
	0.0.0.0.0.0.0	66 68 — 70		42		
Coarse-grained sand and gravel; shells. [Qvr]	0.0.0.0.0.0.0.0.0.0.0.0.0.0.0.0.0.0.0.0.	72 74		37		
	T. D. 77'	76		50		

SITE: I-5, just north of Boeing Cutoff, HQ4. GROUND ELEVATION: 9.0'

Lithology		Depth (feet)	Water Level	Blow Count (blows/ft)	Water Content (percent)	Atterberg Limits (percent)
Silty clay. [Qal]		0 2 4 6 8 —10				
		12 14		33		
		16 18		27		
		20 22		28		
		24		38		
Silty fine-grained sand; trace of silt. [Qal]		26 28				
		30 32		20		
		34 36				
		38 40				
		42 44		7		
Medium-grained sand. [Qal]		46 48				
		50 52 54 56 58 60				
Silt; organic material. [Qal]		62 64		4		
		66				
		68 70				
		72 74		4		
Sandy silt; shells. [Qal]		76 78		45		
	0,0,0,0,0,0	80 82				
Silty sand and gravel; shells. [Qvr]		84 86 88		44		
Hard carbon peat and gravel. [Qvr]		90 92				
Sand and gravel. [Qvr]	0.0.0.0.0.0	94 96		83		
• • • •	T. D. 99'	98		80		

SITE: I-5, near south end of Boeing Field, Test Hole 905. GROUND ELEVATION: 118'

Lithology		Depth (feet)	Water Level	Blow Count (blows/ft)	Water Content (percent)	Atterberg Limits (percent)
Gravelly, silty sand. [Qvt]		0 2 4 6 8		19		
Silt with clayey silt veins. [Qva]		—10 12 14 16 18 —20 22		25 33		
Silty sand. [Qva]		24 26 28 —30 32 34		34 39 34		
Silty clay with clay veins. [Qva]	T. D. 48'	36 38 40 42 44 46 48		30		

SITE: Test hole 942; I - 5 Middle of Boeing Field.

GROUND ELEVATION: 82'

Lithology		Depth (feet)	Water Level	Blow Count (blows/ft)	Water Content (percent)	Atterberg Limits (percent)
Gravelly, sandy silt; layers of silt and fine- grained sand.		0 2 4 6 8		100/11"	•	
Silty, fine- to medium-grained sand.		10 12 14 16 18		52 46/6"		
Gravelly, silty, fine-grained sand. [Qvt]		20 22 24 26 28 30		50/4" 53/6"		
Silt. [Qva]		32 34 36 38 — 40		45		
Silty, medium-grained sand. [Qva]	T.D. 48'	42 44 46 48		46 63		

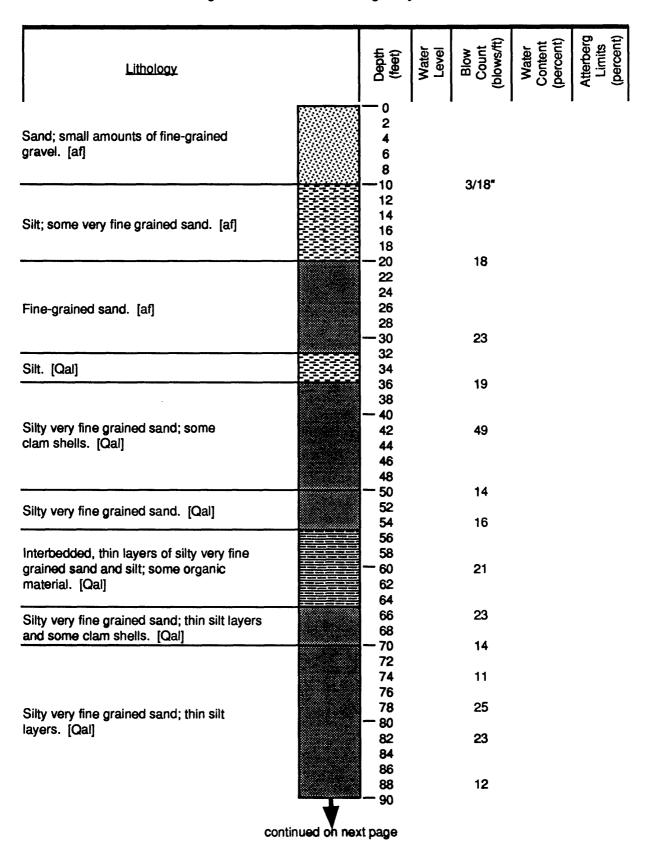
SITE: Station 183+50 Alaska Way viaduct near Spokane Street, hole #1.

GROUND ELEVATION: 5.6'

			_			
Lithology		Depth (feet)	Water Level	Blow Count (blows/ft)	Water Content (percent)	Atterberg Limits (percent)
Gravelly fill. [af]	0.0.0.0.0.0.0	— 0 2 4 6 8				
Silty very fine-grained sand. [af]		10 12 14 16 18 20 22 24		7 9 10		
Silt. [Qal]		26 28 — 30 32 34 36 38 — 40 42 44		47 5 28		
Silty very fine-grained sand. [Qal]		46 48 — 50		37		
Silty very fine-grained sand; some clam shells. [Qal] Silty very fine-grained sand; occasional rotten wood. [Qal]		52 54 56 58		17		
Silty very fine-grained sand. [Qal]		60 62 64 66 68		29 34		
Silty very fine-grained sand; some clam shells and thin silt layers. [Qal]		70 72 74		45 15		
Silty very fine-grained sand; some clam shells and rotten wood. [Qal]		76 78 — 80		17		
Lost Samples.		82 84 86 88 — 90 92 94 96		15 16 25		
	T. D. 102'	98 — 100		5		

SITE: Station 194+97 Alaska Way near Spokane Street, hole #8.

GROUND ELEVATION: 6.4'



NUMBER: **79016 (cont.)**

SITE:

GROUND ELEVATION:

INVESTIGATOR:

Lithology		Depth (feet)	Water Level	Blow Count (blows/ft)	Water Content (percent)	Atterberg Limits (percent)
See previous page		—90 92	•			•
		94 96		3		
Silt. [Qal]		98				
·		100 102				
		104 106		23		
Silty very fine grained sand with some		108		23		
organic matter. [Qal]		110 112		36		
		114				
011. 10. 11		116 118		8		
Silt. [Qal]		120		12		
		122 124		22		
Interbedded, thin layers of silty fine- grained sand and silt. [Qal]		126 128				
	T. D. 131.5	 130		75		

SITE: Station 204+25; Alaska Way Viaduct south of Spokane Street, hole #14.

GROUND ELEVATION: 8.2'

Lithology		Depth (feet)	Water Level	Blow Count (blows/ft)	Water Content (percent)	Atterberg Limits (percent)
Silty gravelly sand. [af]		— 0 2 4	•			•
Silty sand. [af]		6 8 10 12		5		
Silt; sand seams. [Qal]		14 16 18 — 20 22		1		
Fine- to medium-grained sand; silt seams. [Qal		24				
		26 28 30		14		
		32 34		21		
Fine- to medium-grained sand. [Qal]		36 38		34		
		40 42 44 46		66		
		48 50 52		5		
Silt and silty fine-grained sand. [Qal]		54 56		9		
Silt. [Qal]		58 60		5		
		62 64		12		
Silt; silty sand seams. [Qal]		66 68		5		
Fine- to medium-grained sand; sandy silt		70 72 74		19		
seams. [Qal]		76 78		32		
Silty medium- to fine-grained sand; few sandy silt seams. [Qal]		80 82 84		20 16		
Fine- to medium-grained sand with silt		86 88		10		
seams [Qal]		90 92		44		
Fine- to medium-grained sand; fine-grained sandy silt seams. [Qal]		94 96 98		21		
• •	T D 101'	— 100		50		

SITE: Cloverdale Interchange, Highway 509, station U-13+00, hole #1.

GROUND ELEVATION: 16.2'

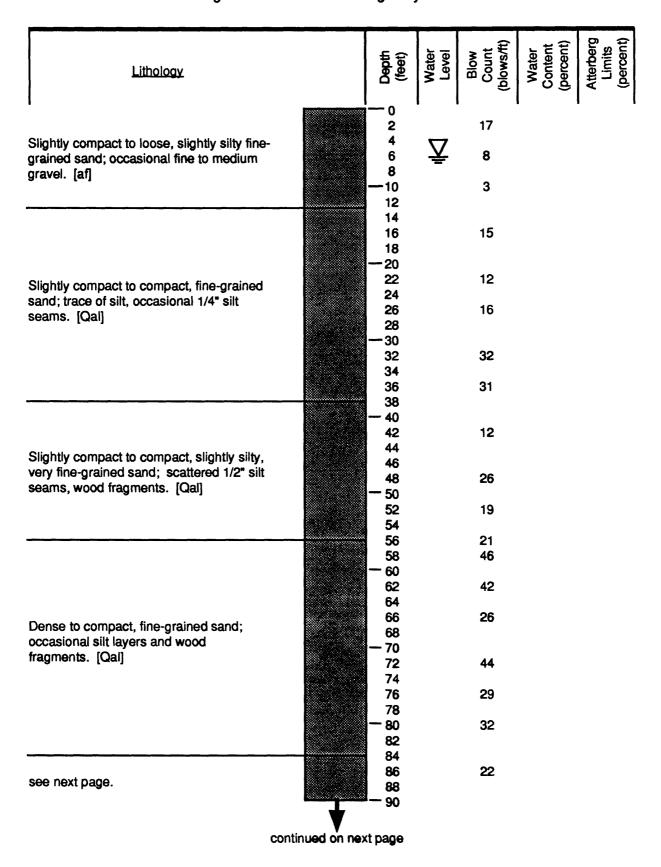
Lithology		Depth (feet)	Water Level	Blow Count (blows/ft)	Water Content (percent)	Atterberg Limits (percent)
Fine- to medium-grained sand with occasional gravel. [af]		— 0 2 4	⊈	7		
Soft, fine sandy silt with occasional organic silt lenses and lenses of silty fine sand. [Qal]		6 8 10	_	5		
Moderately compact, fine- to medium- grained sand. [Qal]		12 14		19		
Moderately loose, silty, fine- to medium-grained sand; occasional shell fragments and organic material, lenses of fine to coarse sand. [Qal]		16 18 20		5 19		
Compact, silty fine- to medium-grained sand and fine- to coarse-grained sand; occasional gravel and thin lenses of silty fine sand. [Qvr]		22 24 26 28 —30		31 30		
Very firm, sandy clayey silt with gravel. [Qvt]		32 34 36 38 40		124 110		
Compact, fine- to coarse-grained sand and gravel; occasional pockets and lenses of silty fine- to coarse-grained sand. [Qn]	0.000000	42 44 46 48		81		
	T. D. 50'			72		

SITE: Cloverdale Interchange, Highway 509, station BR-51+00, hole #2. GROUND ELEVATION: 37.6'

<u>Lithology</u>		Depth (feet)	Water Level	Blow Count (blows/ft)	Water Content (percent)	Atterberg Limits (percent)
Moderately compact, fine- to medium- grained sand with a trace of silt. [Qal]		- 0 2 4 6 8 10 12 14		18 15 17		
Alternating thin layers of moderately firm, fine-		16 18 20 22 24	Ā	34 23		
to medium-grained sand and clayey silt. [Qal]		26 28		12		
Very firm, sandy clayey silt with occasional gravel. [Qvt]	000000	30 32 34		39		
Very compact, silty medium- to coarse-grained sand with occasional gravel. [Qva]		36 38		110		
	T. D. 40'	40		200/10"		

SITE: Duwamish Waterway Pier #5, Highway 509, station 408+26, hole #11-1.

GROUND ELEVATION: 5.3'

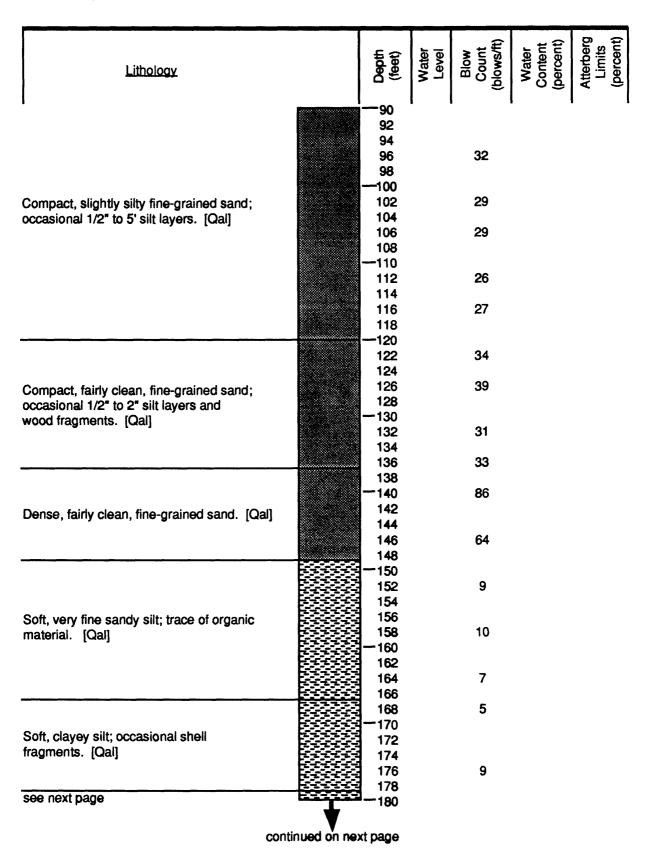


NUMBER: 79020 (cont.)

SITE:

GROUND ELEVATION:

INVESTIGATOR:



NUMBER: 79020 (cont.) SITE:

GROUND ELEVATION:

<u>Lithology</u>		Depth (feet)	Water Level	Blow Count (blows/ft)	Water Content (percent)	Atterberg Limits (percent)		
Soft, alternating layer of clayey silt and		180 182 184 186 188		9				
very fine sandy silt; occasional shell fragments. [Qal]		190 192 194		9				
		196 198 —200	10					
Stiff, silty clay; occasional shell fragments. [Qal]		202 204 206 208		17				
		210 212 214 216		13				
		218 220 222 224		15				
		224 226 228 —230		25				
		232 234 236		16				
Stiff, slightly silty clay; trace of organic		238 240 242 244		18				
material, 1/2" layers of silty fine sand. [Qal]		246 248 250		16				
		252 254		19				
Stiff, clayey, very fine sandy silt. [Qal]		256		75				
Dense, silty to slightly silty fine-grained sand with 2" to 6" layers of slightly silty clay. [Qvr]		258 260 262		75 71				
Hard clay; occasional gravel and partings of very fine sand. [Qvr]		264 266 268 —270		42				
continued on next page								

NUMBER: **79020 (cont.)** SITE:

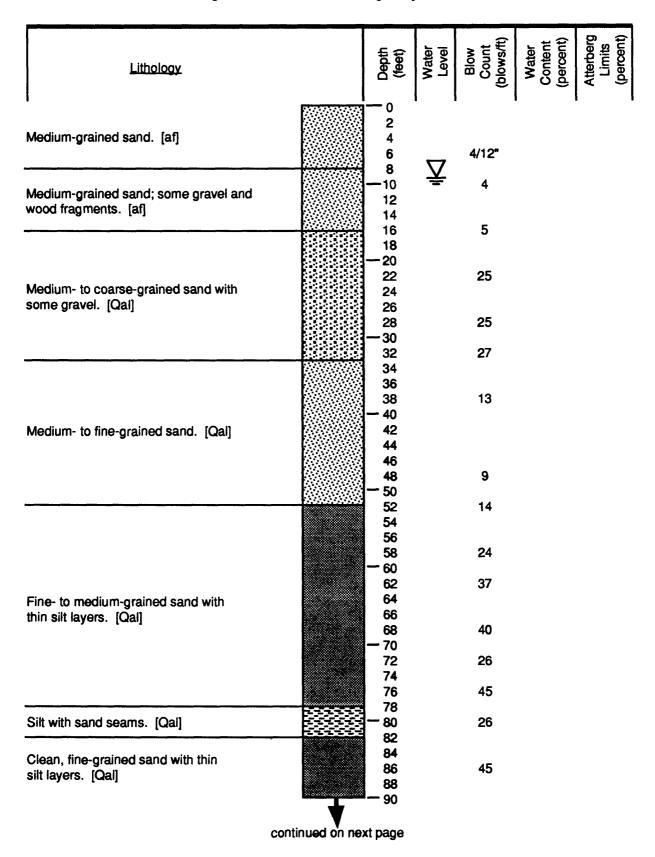
GROUND ELEVATION:

Lithology		Depth (feet)	Water Level	Blow Count (blows/ft)	Water Content (percent)	Atterberg Limits (percent)
see previous page.		270 272		68 68		'
Stiff, silty clay with partings of fine-grained sand. [Qvr]		274 276 278 —280		23		
Hard and dense, silt and fine-grained sand in variable 1" to 6" layers. [Qvt]		282 284 286		96		
		288 290		59		
Dense, slightly silty to silt fine-grained sand; scattered gravel. [Qvt]		292 294 296		88		
Very hard, clayey fine sandy silt; scattered		298 300		64		
gravel. [Qvt]	T. D. 304'	302 304		79		

SITE: First Avenue South Bridge, Highway 509, Duwamish Waterway, hole #1.

GROUND ELEVATION: 5.53'

INVESTIGATOR: Washington State Division of Highways.



NUMBER: **79021 (cont.)** SITE:

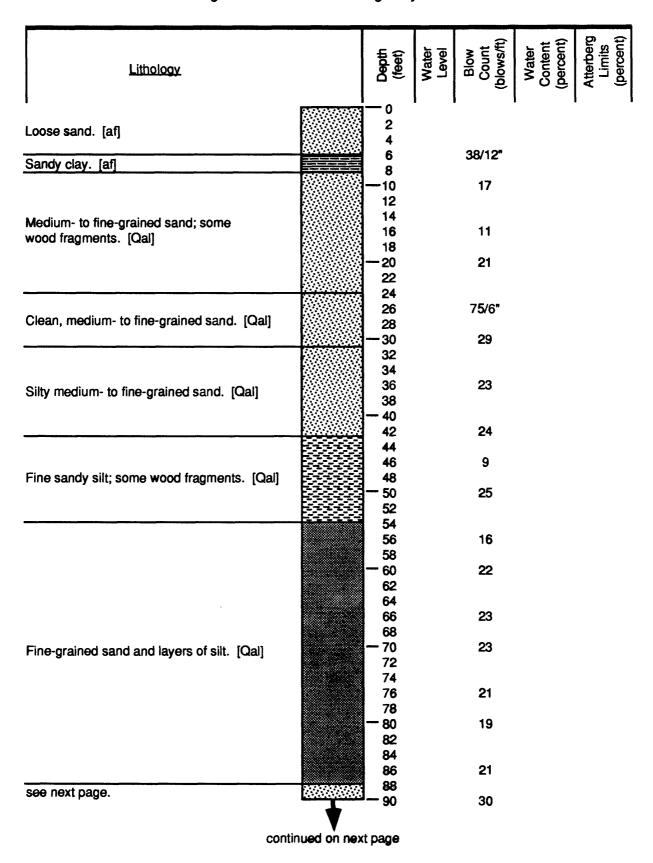
GROUND ELEVATION:

<u>Lithology</u>		Depth (feet)	Water Level	Blow Count (blows/ft)	Water Content (percent)	Atterberg Limits (percent)
see previous page.		—90	•			•
		92 94		32		
Layered, clean fine- to medium-grained sand		96 98		21		
and sandy silt. [Qal]		—100 102		22		
		104				
		106 108		23		
Clean, medium- to fine-grained sand. [Qal]		110				
		112 114		37		
		116				
		118 120		25		
		122		34		
		124 126				
		128		11		
Alternating layers of clean fine-grained sand and silty fine-grained sand with organic		130 132		33		
material. [Qal]		134				
		136 138		32		
		—140		35		
		142 144		39		
Silty fine-grained sand. [Qal]		146				
Sity inte-grained saild. [Qai]		148 150		26		
		152		32		
		154 156		39		
Alternating layers of clean fine-grained sand and silty fine sand with organic material. [Qal]	T.D. 450:	158		42		
, , , , , , , , , , , , , , , , , , , ,	T. D. 158'					

SITE: First Avenue South Bridge, Highway 509, Duwamish Waterway, hole #6.

GROUND ELEVATION: 1.94'

INVESTIGATOR: Washington State Division of Highways.



NUMBER: **79022 (cont.)**

SITE:

GROUND ELEVATION:

Lithology		Depth (feet)	Water Level	Blow Count (blows/ft)	Water Content (percent)	Atterberg Limits (percent)
Compact, clean, medium- to fine-grained sand with some organic material. [Qal]		90 92 94 96 98 —100 102 104 106 108 —110 112 114 116 118		46 46 27 48 30 26		
Compact, clean, medium-grained sand. [Qal]		—120 122 124 126		26 66		
Soft, sandy silt; some wood fragments. [Qal]		128 130		26		
Soft silt; some wood fragments. [Qal]		132 134		17		
Fine-grained sand. [Qal]		136 138 —140 142 144		15 14		
Alternating layers of silt and soft clay. [Qal]		146 148 —150 152 154 156 158 —160 162 164 166 168 —170 172 174 176 178 —180		13 13 8 9 11 11		
conti	nued on nex					

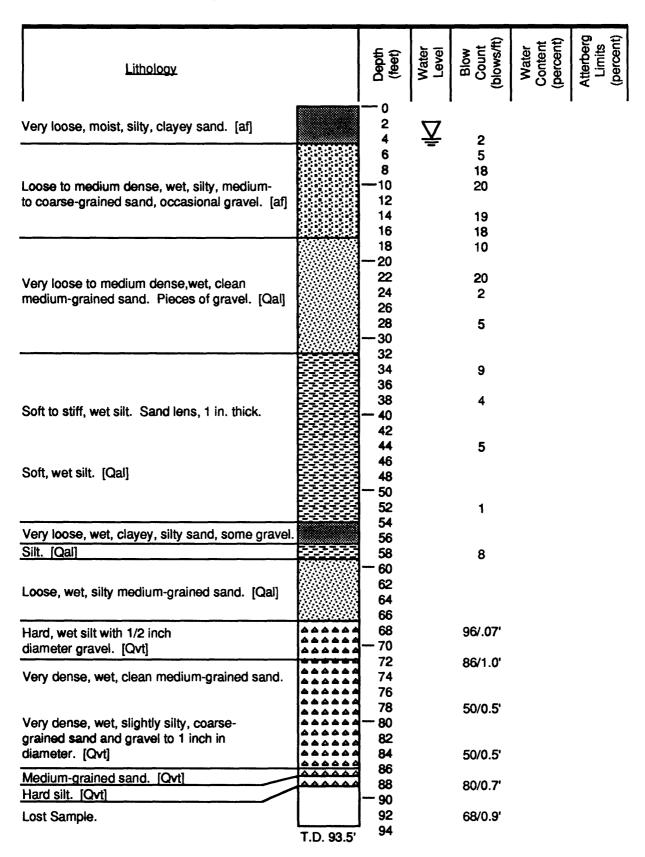
NUMBER: 79022 (cont.)

SITE:

GROUND ELEVATION:

<u>Lithology</u>	Depth (feet)	Water	Blow Count (blows/ft)	Water Content (percent)	Atterberg Limits (percent)
see previous page.	180 182 184 186 188	•	11	•	•
	—190 192 194 196		10 14		
Clay with shells. [Qal]	198 —200 202 204		12 13		
	206 208 —210 212 214		14 19		

SITE: Seattle Kingdome GROUND ELEVATION: 14.1' INVESTIGATOR: Geolabs, Inc.



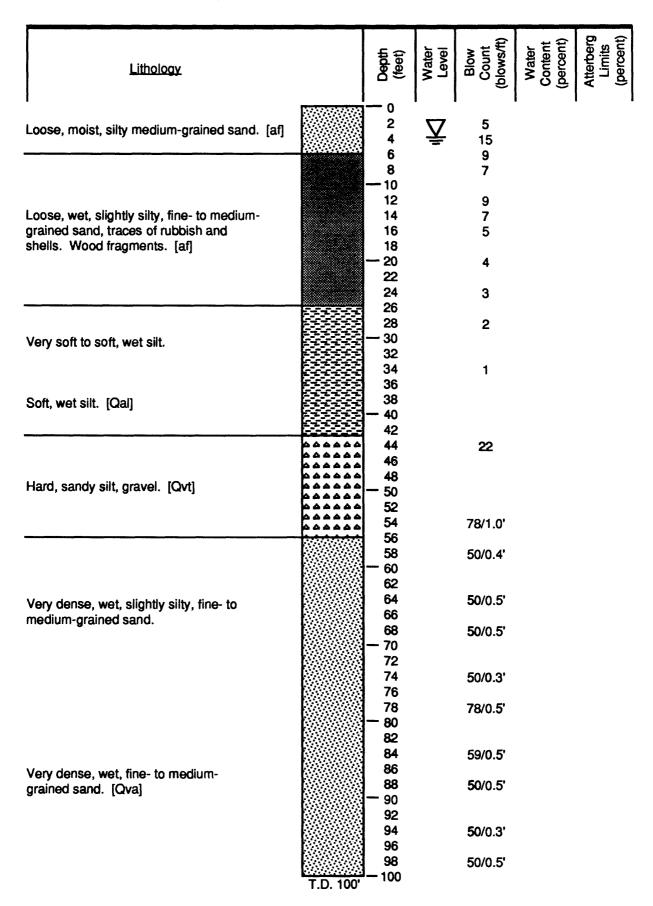
NUMBER: **79026** SITE: Seattle Kingdome GROUND ELEVATION: 13.9'

Lithology		Depth (feet)	Water Level	Blow Count (blows/ft)	Water Content (percent)	Atterberg Limits (percent)
Medium dense, wet, sand with gravel. [af]		0 2 4 6	Ā	18 25		
Loose, wet sand. [af]		8 10 12		5 4		
Very loose to loose, wet, silty sand, organic material. [Qal]		14 16 18 20 22 24		6 4 2 3		
Very soft, wet silt, shells.		26 28 30 32		2		
Loose, wet, silty sand, organic material and shells. [Qal]		34 36 38 — 40		2		
Medium-dense to dense, wet sand, gravel layers. [Qvt]		42 44 46 48		2 2 88/1.0'		
		50 52 54		120/1.0'		
Very dense, wet sand and gravel. [Qvt]		56 58 60 62		72/1.0'		
		64 66 68		96/1.0' 108/1.0'		
		70 72 74 76 78		81/1.0'		
Very dense, wet, fine- to coarse-grained sand. [Qva]		80 82 84 86		100/0.5'		
Sailo. [Gvaj		88 90 92		65/1.0'		
	T.D. 98.5	94 96 98		50/0.5' 57/0.5'		

NUMBER: **79027**SITE: Seattle Kingdome
GROUND ELEVATION: 13.7'
INVESTIGATOR: Geolabs, Inc.

Lithology		Depth (feet)	Water Level	Blow Count (blows/ft)	Water Content (percent)	Atterberg Limits (percent)
Loose, wet, clean to silty, medium- grained sand. [af]		0 2 4 6 8 10 12	₹	4 5 1 3		
Stiff to very stiff, wet silt. [af]		14 16 18		14 20		
Loose to medium-dense, wet, medium-grained sand, organic material. [Qal]		20 22 24 26		8 10		
Soft to medium-stiff, wet silt.		28 30 32 34		3		
Medium-stiff, wet silt. [Qal]		36 38 40 42 44		5		
Hard, sandy silt, gravel. [Qvt]		46 48 50 52 54		50/0.4'		
		56 58 — 60		50/0.5'		
Very dense, wet, slightly silty, fine- to coarse-grained sand andf sandy gravel to 1/2 inch in diameter. [Qvt]		62 64 66 68		50/0.3'		
, <u>, , , , , , , , , , , , , , , , , , </u>		70 72 74		50/0.5' 50/0.3'		
Location of boundary uncertain?		76 78 — 80		69/1.0'		
Very dense, wet, fine- to medium-grained sand. [Qva]		82 84 86 88		50/0.3'		
	T.D. 94.0'	90 92 94		113/1.0' 113/1.0'		

NUMBER: **79028**SITE: Seattle Kingdome
GROUND ELEVATION: 13.3'
INVESTIGATOR: Geolabs, Inc.



SITE: Holly Managment, 2621 Second Avenue.
GROUND ELEVATION: 100'
INVESTIGATOR: Hemphill Engineering, 4612 170th Place N.E., Redmond,

Washington 98052.

Lithology		Depth (feet)	Water Level	Blow Count (blows/ft)	Water Content (percent)	Atterberg Limits (percent)
Fine-grained, gravelly, silty, very fine- to fine-grained sand. [af]		0 2 4 6 8		20 60	•	•
Fine sand. [af]		- 10		60		
Layers of clayey silt and very fine- grained sand. [Qva]		12 14 16 18 — 20 22		30 40 40 60		
Clayey silt and very fine-grained sand		24 26 28 30		45		
varved. Silt is indurated and shows slickensides. [Qva]		32 34 36		80		
Fine sand. [Qn] Silt. silty fine-grained sand with traces of wood.		38 — 40		100+		
Very fine-grained sandy silt. [Qn] Gravelly sand. [Qn] Silty, very fine-grained sand. [Qn]		42 44 46		100+		
Layers of fine-grained sand, silt, and fine-grained gravelly silt. [Qn] Gravel and sand. [Qn]	0.0.0.0.0.0.0.0.0.0.0.0.0.0.0.0.0.0.0.	48 50 52		100+		
Gravelly sand. [Qn]	0.0.0.0.0.0	54 56 58 60				
		62 64 66 68 70		100+		
		72 74 76 78		100+		
Silty, sandy gravel. Some gravel greater than 1 inch in diameter. [Qn]		80 82 84 86 88		100+		
				100+		

SITE: Federal Building, Seattle Washington.

GROUND ELEVATION: 22.87'

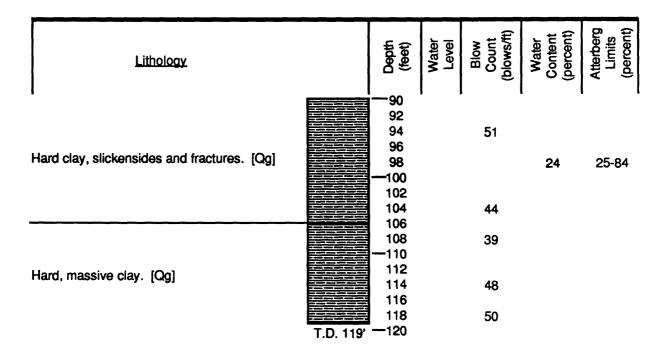
INVESTIGATOR: Shannon and Wilson, log of boring B-9.

Lithology		Depth (feet)	Water Level	Blow Count (blows/ft)	Water Content (percent)	Atterberg Limits (percent)
Loose, slightly silty to silty, fine-grained sand; with scattered, medium- to coarse-grained sand, gravel to 1 onch in diameter, brick fragments, and traces of organics. [af]		- 0 2 4 6 8	•	3 2 6	ı	
Dense to very dense, clean to silty, fine- to coarse-grained sand with scattered gravel to 1 1/2 inch in diameter. [Qvr]		-10 12 14 16 18 -20 22 24 26 28 -30 32		35 52 38 57 61	4 3	
Hard, fine-grained sandy clay. [Qvr] Hard, fine-grained sandy, silty clay with scattered, medium- to coarse-grained sand, and gravel to 1 inch in diameter. Occasional partings of fine-grained sand. [Qvt]		34 36 38 40 42 44 46		77 100/5"	15	
Very dense, wet, slightly silty to silty, medium-to coarse-grained sand. [Qvt]		48 50 52 54 56		108	12	
Very dense, silty fine-grained sand, with scattered coarse-grained sand and gravel to 1/2 inch in diameter. Scattered thin layers of fine grained sandy, clayey silt, organic material. [Qn]		58 60 62 64 66		50/6"	18	17-38
Hard, silty fine-grainedsand with scattered medium- to coarse-grained sand, and gravel to 1 inch in diameter. [Qg]		68 70 72 74 76		79/6" 50/1"		
Hard, fine-grained sandy, silty clay with scattered, medium- to coarse-grained sand and gravel to 1/2 inch in diameter. [Qg] see next page		78 80 82 84 86 88		70/6" 64/6" 43		
contir	nued on ne	90 92		4 3		

NUMBER: 79030 (cont.)

SITE:

GROUND ELEVATION:



SITE: Daon Pacific Building, 720 Olive Way

GROUND ELEVATION: 115'

INVESTIGATOR: Hart, Crowser and Associates Inc., Design Service Building, 1910 Fairview Ave. E., Seattle, Washington, 98102; Boring log B-6, figure A-7 of report.

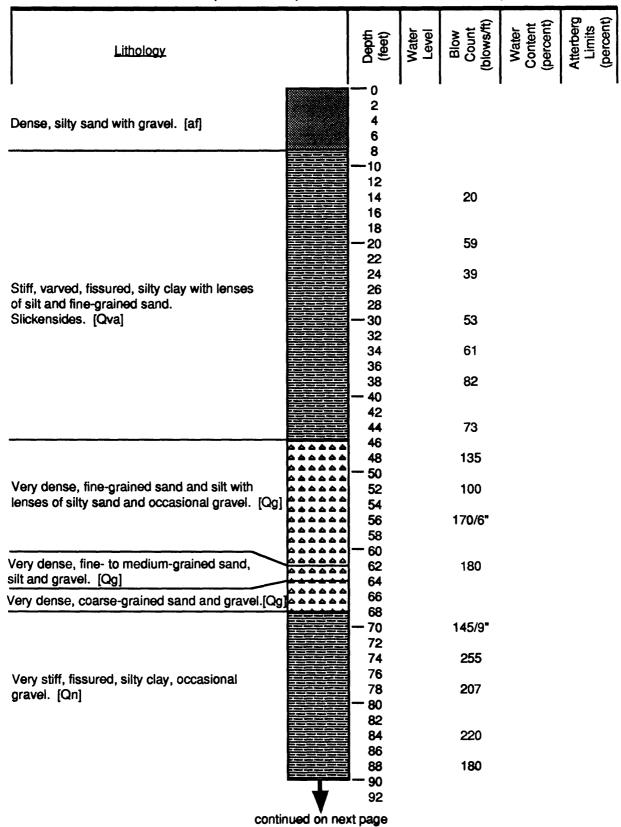
Lithology		Depth (feet)	Water Level	Blow Count (blows/ft)	Water Content (percent)	Atterberg Limits (percent)
Dense to loose, damp, silty, gravelly sand with silt pockets: brick and wood debris. [af]		0 2 4 6		12		•
Damp, slightly silty, fine-grained sand. [Qva]		8 10 12 14		3 7		
		16 18 —20		16		
Dense, damp, slightly silty, very fine and fine-grained sand. [Qva]		22 24 26		20		
Dense, damp, slightly gravelly, fine- to medium-grained sandy silt. [Qva]		28 30		33		
Very stiff, damp, clayey silt and silty clay; occasional fine-grained sand seams and		32 34		27 18		
slickensides. [Qva]		36 38		19 20		
Hard, moist, gravelly, fine-to coarse-grained sandy, clayey silt. [Qva]	333333	40 42		55		
Very stiff to hard, moist, clayey silt and silty clay; lenses of damp to wet, silty, very fine-		44 46		36 30		
grained sand; fine- to medium-grained sand and scattered gravel near 48'. Hard, damp, clayey silt and silty clay. [Qva]		48 50 52		55		
Dense, damp, slightly silty, fine-grained sand. [Qg]		54 56 58 — 60		35 90		
Very dense, damp to moist, gravelly, silt to fine- to medium-grained sand. [Qg]		62 64		50/2" 50/5"		
		66 68 — 70		50/5"		
Very dense, damp to saturated, slightly silty fine-grained sand. [Qg]		72 74 76		90/9" 82/11"		
mie-gramou sanu. [Ugj		78 80 82		50/5"		
Very dense, wet, silty, gravelly, fine- to		84 86		50/5"		
coarse-grained sand. [Qg]		- 90 - 90		50/5"		
	T.D. 93'	92		50/5"		

SITE: Bank of California Center, 900 4th Ave., Seatle, Pentagram Corporation.

GROUND ELEVATION: 136'

INVESTIGATOR: Dames and Moore

*NOTE: Different standard penatration procedure-- 265' wt w/ 24" drop, 3.5 " dia S.B.



NUMBER: 79032 (cont.)

SITE:

GROUND ELEVATION:

Lithology		Depth (feet)	Water Level	Blow Count (blows/ft)	Water Content (percent)	Atterberg Limits (percent)
•		—90 92	•	160		
Very stiff, fissured, silty clay, occasional gravel, [Qn]		94 96 98	$\bar{\Sigma}$	70		
		100 102 104	perched if	84		
		106 108		119		
Fine- to medium-grained sand. [Qg]	000000	—110 112 114		250/5*		
	000000	116		325/5"		
Very dense, silty sand with gravel and	000000	118 120 122		300		
layers of silty, fine-grained sand. [Qg]		124		300		
	T.D. 128'	126 128		300		

SITE: Sea First Plaza, 800-22 5th Ave.

GROUND ELEVATION: 175'

INVESTIGATOR: Shannon and Wilson, Inc.

*NOTE: Down-hole hammer changed to 240lb at 145'.

		. -	<u>_</u>	_ ± €	r tt.	erg nt)
Lithology		Depth (feet)	Water Level	Blow Count (blows/ft)	Water Content (percent)	Atterberg Limits (percent)
Gravel, sand, and brick. [af]	0,0,0,0,0,0	- o	i I		İ	i l
Very dense, silty sand and sandy silt. [Qva]		2 4 6 8		52 42	25 36	
Very stiff to hard, silty clay with occasional fine-grained sand partings. [Qva]		—10 12 14 16				
		18 20 22 24 26 28		30	38	
Hard, silty clay with occasional partings of fine-grained sand. [Qva]		-30 32 34 36 38 -40 42 44 46 48 -50		33	38	
Wet, silty, fine-grained sand. [Qva]		52 54 56 58 60 62 64 66 68 70 72 74		55	22	
		76 78 — 80		40	18	
Alternating layers of very dense, wet, sandy silt; hard, silty clay; and clayey silt with traces of organic material. [Qn]	¥	82 84 86 88 — 90 92		95	22	
cont	inued on nex	t page				

NUMBER: 79033 (cont.)

SITE:

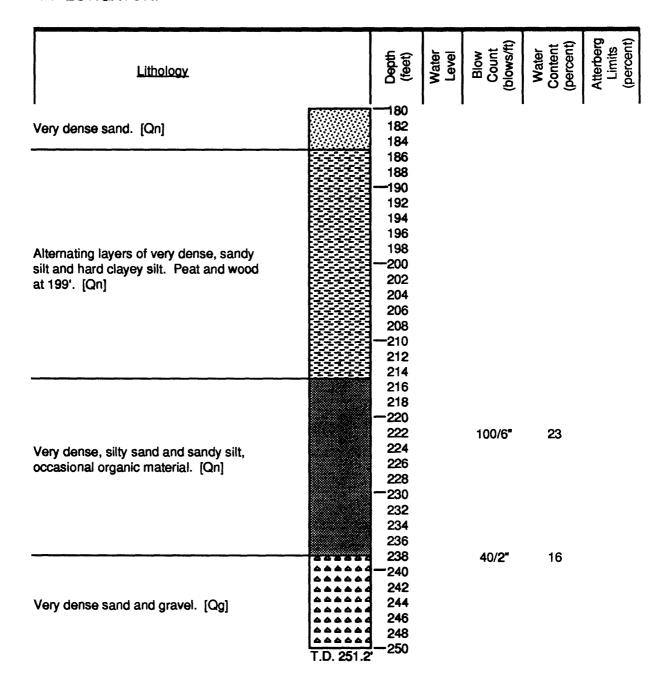
GROUND ELEVATION: INVESTIGATOR:

Lithology		Depth (feet)	Water Level	Blow Count (blows/ft)	Water Content (percent)	Atterberg Limits (percent)
see previous page		90 92 94 96				
Very dense, clean and silty sand, and gravel. [Qg]		98 —100 102 104 106 108 —110 112		50/1"	6	
Hard, clayey silt, occasional organic material. [Qn]		116 118 —120 122 124 126 128		50/3 "	24	
Very dense, wet, clean to silty sand. [Qn]		130 132 134 136 138		100/5"	22	
Alternating layers of very dense, sandy silt and hard, clayey silt with occasional organic material. [Qn]		-140 142 144 146 148 -150 152 154 156 158		50/3"	24	
Very dense sand. [Qn]		-160 162 164 166 168 -170 172 174 176 178		50/3*	20	
cont	cinued on nex	182				

NUMBER: 79033 (cont.)

SITE:

GROUND ELEVATION:



SITE: One Union Center, 600 University Street GROUND ELEVATION: 169.8"

INVESTIGATOR: Shannon and Wilson, Inc., log of boring AB-101.

Lithology		Depth (feet)	Water Level	Blow Count (blows/ft)	Water Content (percent)	Atterberg Limits (percent)
Fill: Dense, silty, sandy, gravel; pockets of sand, clay, and wood fragments from 6 - 8 feet.		0 2 4 6 8		60	19	
Vashon Advance Outwash Complex: Hard, sandy, silty clay; occasional organics.		—10 12		40		
		14 16 18		10 35	37 40	
Stiff ti hard, silty clay; occasionally laminated and with partings of silty finegrained sand, trace of slickensides.		20 22		25	39	
		24 26 28 — 30		26 22	38 25	
		32 34		25	43	28-50
		36 38 — 40		25	34 30	22-42
		42 44		65	41	
Very dense, silty fine-grained sand; occasionally clayey. Water bearing.		46 48 50		80	24	
		52 54		56	18	
		56 58 60 62		75 50/6"	17 16	
		64 66		50/5"		
Very dense, silty, clayey, fine- to medium- grained sand; trace of organics and occasional silty and gravelly zones.		68 70 72		55	18	
, , , , , , , , , , , , , , , , , , , ,		74 76 78		77	12	
		- 80 82		80	21	
		84 86 88		50/5"		
see next page	1	90 92			33	30-67
contir	ued on nex	t page				

NUMBER: **79034 (cont.)** SITE:

GROUND ELEVATION:

Lithology		Depth (feet)	Water Level	Blow Count (blows/ft)	Water Content (percent)	Atterberg Limits (percent)
•		90 92 94 96	•	35	36	
Hard, silty clay; trace of slickensides and		98 100 102		37	33	
occasional silt lenses.		104 106			32	24-60
		108 110 112		37		
		114 116		55 -79	35	
		118 120				
		122 124		90 50/6"	11	
		126 128		00/0	•••	
		130 132		50/6"	17	
		134 136		50/3"		
		138 140		50/6"	23	
Very dense, silty, gravelly, fine- to coarse-grained sand.		142				
oodise grained sand.		144 146		50/4"	8	
		148 150				
		152 154		50/5"	9	
		156 158				
		160 162		50/1"		
		164 166		50/2"	12	
		168 170			_	
Hard, silty clay; trace of fine- to coarse- grained sand, slightly laminated and		172 174			29	
shows slickensides.		176 178		50/11"		
		180 182				
co	ontinued on ne					

NUMBER: 79034 (cont.) SITE:

GROUND ELEVATION:

			_			
<u>Lithology</u>		Depth (feet)	Water Level	Blow Count (blows/ft)	Water Content (percent)	Atterberg Limits (percent)
see previous page		180 182 184	•		19	
Very dense, clean to slightly silty, fine- to medium-grained sand; trace of gravel.		186 188 —190 192 194 196 198 —200 202		50/5"		
Very dense, silty, gravelly, fine- to coarse-grained sand.		204 206 208 —210 212 214 216 218 —220		50/0"	22	
		224 226 228 —230 232 234		50/3"	13	
Very dense, silty sand; trace of fine gravel.		236 238 —240 242 244 246		50/2"	15	
	T.D. 250'	248 —250		60/6"		

SITE: One Union Center, 600 University Street.

GROUND ELEVATION: 164.8'

INVESTIGATOR: Shannon and Wilson, Inc., log of boring AB-102.

		7				B 🙃
Lithology		Depth (feet)	Water Level	Blow Count (blows/ft)	Water Content (percent)	Atterberg Limits (percent)
Dense, silty, gravelly, fine- to medium-grained sand; concrete fragments from 1 to 3'. [af]		— 0 2			1	
Medium dense to dense, clayey, silty sand. [Qva]		4 6 8 —10		45 15	12 26	
Hard, sandy, silty clay; occasional coarse- grained sand, gravel, and organics. [Qva]		12 14 16 18 — 20 22		60 50/5" 42 32 65	16 12 16 18 16 16	19-36
Stiff to hard, silty clay; occasional fractures, laminations, slickensides, and fine-grained sand partings. [Qva]	00000	24 26 28 — 30	8	48 33	16 36 2 8	
	4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	32 34 36	87/61/6	65 57	18 22	
		38 40 42	=	60	17	
	44444	44 46		50/5.5*	29	
Very dense, silty, clayey, fine- to coarse- grained sand; scattered gravel and		48 50 52		50/6*	10	
occasional traces of organics. [Qg]	40464 46464 66464	54 56		70	14	
		58 60 62		50/4"	14	
	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	64 66	8	84	12	
	44444 44444	68 — 70	7/61/2	80	11	
	66666 66666	72 74 76	Ϋ́	65	13	
		78 80		50/5"		
Very dense, silty fine-grained sand. [Qg]	44444 44444	82 84	œ	50/6"	23	
		86 88	 	30	34	
Very stiff to hard, silty clay; occasional laminations, fractures, slickensides, and partings of fine-grained sand. [Qg]		— 90 92 94	Ϋ́	40	34 35	28-60
	T D 101 5	96 98 —100		36 32	33 36	

SITE: One Union Center, 600 University Street, Seattle Washington.

GROUND ELEVATION: 169.7'

INVESTIGATOR: Shannon and Wilson, Inc., log of boring AB-103.

Lithology		Depth (feet)	Water Level	Blow Count (blows/ft)	Water Content (percent)	Atterberg Limits (percent)
Dense, silty, gravelly, fine- to coarse- grained sand. [af]		0 2 4 6		27 24	8 11	
Very stiff to hard, sandy, clayey silt; occasional carbonaceous stains. [Qva]		8 10 12 14		17 26 17	18 23 34	
Very stiff to hard, silty clay; scattered partings and traces of slickensides. [Qva]		16 18 20 22		45 22 21	21 40 35	
Dense to very dense, silty, fine- to medium- grained sand; occasional lenses of clayey silt and fine-grained gravel. [Qva]		24 26 28 —30	6/26/78 4 X X 9/19/78	61 45	28 14 24	28-35
Very stiff, silty clay; laminated, numerous layers and partings. [Qva]		32 34 36	$\overline{\underline{\underline{\nabla}}}$	23 27	31	
Dense, slightly silty to silty, fine-grained sand. [Qva]	T.D. 41.5'	38 40 42	6/26/7	50	24	

SITE: West Seattle Freeway Bridge Replacement, S.W. Spokane Street. GROUND ELEVATION: 4'

INVESTIGATOR: Shannon and Wilson, Inc.; log of boring WS-2

Lithology		Depth (feet)	Water Level	Blow Count (blows/ft)	Water Content (percent)	Atterberg Limits (percent)
Dense, slightly silty, gravelly, fine- to coarse-grained sand; scattered organic material and debris. [af]		— 0 2 4		17	12	'
material and debris. [al]	0.0.0.0.0.0.0	6		11	9	
Dense, clean, fine- to coarse-grained sandy gravel. [af]	0.0.0.0.0.0.0	8 10 12	¥	29 26	23	
Salloy graver. [al]	0:0:0:0:0:0	14 16 18 —20		20	26	
Dense, slightly silty, fine- to medium- grained sand; scattered organic material,		22 24 26		23 30	29 25	
shell fragments and thin silty sand and fine- grained sandy silt layers. [af]		28 30		20	29	
		32		14	30	
		34		34	29	
		36 38		31 4 0	29	
		- 40 42 44 46 48		45	30 29	
		50 52 54		43	29	
Interbedded, hard, silty clay with a trace of sand; fine-grained sandy, clayey silt; clayey		56 58 — 60		74	27	
silt with a trace of sand; and fine- to medium-		62 64		83	27	
grained sandy, silty clay. [Qvr]		66 68 — 70		57	26	
		72 74		75	25	
		76 78 80			25	
		82 84		96/10"	28	
		86 88		51/6"		
	*	90 92		53/6"	30	
cor	itinued on ne	xt page				

NUMBER: **79037 (cont.)**

SITE:

GROUND ELEVATION:

Lithology		Depth (feet)	Water Level	Blow Count (blows/ft)	Water Content (percent)	Atterberg Limits (percent)
•		90 92 94 96	•	53/3"	24	'
	The stage of the s	98 100 102		50/5"	22	
see previous page		104 106 108		50/4"	23	
		110 112		51/4"	20	
		114 116 118 —120		50/5"	19	
		122			20	19-31
	000000	124 126		50/3*	16	
		128 130 132		51/3"		
		134 136		50/3"	19	
Very dense, silty fine-grained sand that		138 140 142		50/5"	23	
grades to fine-grained sandy silt with depth; scattered thin, clayey silt layers. [Qvt]	44444	144 146 148		52/4"	19	
		150 152		51/2"		
		154 156 158		50/3"	20	
		160 162 164		52/2"	20	
	T.D. 170.2	166 168 —170		53/3"	23	

SITE: West Seattle Freeway Bridge Replacement, S.W. Spokane Street. GROUND ELEVATION: 3.5'

INVESTIGATOR: Shannon and Wilson, Inc., log of boring WS-4.

					· · · · · · · · · · · · · · · · · · ·	
<u>Lithology</u>		Depth (feet)	Water Level	Blow Count (blows/ft)	Water Content (percent)	Atterberg Limits (percent)
		- 0 2 4 6 8 10		4 6 11	11 9 25	
Loose to medium loose, slightly silty, fine- to medium-grained sand, trace of gravel; scattered organic material and very thin silt and clayey silt layers. [af]		12 14 16 18 —20		19 20 12 14	22 28 29 29	
		22 24 26 28 —30		17 29 58 (rock) 22	25 26 21 23	
Soft to stiff, slightly clayey, fine-		32 34 36 38 — 40		20 4 12	25 27 29 29	
grained sandy silt; scattered shell and wood fragments. [Qai]		42 44 46 48		7 6	31 25	
Medium dense to dense, silty fine- grained sand; scattered to numerous shell fragments and wood debris. [Qal]		50 52 54		35	28	
- (au)		56 58 60 62		2 8 6	26 32	
Medium stiff to stiff, slightly clayey silt; scattered thin silty clay layers and wood		64 66 68 — 70		12	27	
debris, and scattered to numerous shell fragments. [Qal]		72 74 76		11	26 27	
Hard, clayey, fine-grained sandy silt, scattered layers of silty clay and gravelly, silty, clayey fine- to medium-grained sand; scattered		78 80 82 84		48	28	
fine- to medium-grained sand.; scattered shell fragments. [Qvr]		86 88 90 92		31	29	
conti	nued on nex					

NUMBER: **79038 (cont.)**

SITE:

GROUND ELEVATION:

						
<u>Lithology</u>	-	Depth (feet)	Water Level	Blow Count (blows/ft)	Water Content (percent)	Atterberg Limits (percent)
		90	•			
see previous page		92 94		71	29	
		96 98		82	33	
		100 102		50/6"	22	
Hard, fine- to coarse-grained sandy, silty clay that grades downward to silt; scattered clayey silt and sandy silt layers. [Qvr]		104 106		33	25	19-29
		108 110 112		55	23	
		114		၁ ၁	23	
		116 118		60	23	
		120 122			22 21	25-27
		124 126		50/6"	26	
		128				
		-130 132		50/5"	23	
		134 136		50/5*	21	
Very dense, fine-grained sandy silt; scattered slightly silty, fine- to medium-		138 140		50/4"	21	
grained sand layers, shell fragments and organic material. [Qvr]		142 144		52/3"	21	
		146 148				
		-150 152		52/4"	18	
		154 156		53/5"	22	
Hard, silty clay; trace of sand, scattered,		158				
very thin silty layers and slickensides. [Qvr]		-160 162		97	29	
		164		97	29	
		166 168		54/6"	27	25-56
		170 172		53/6"	27	
		174				
Hard, silty clay; scattered sand, gravel and slickensides. [Qvr]		176 178			21	
	T.D. 180.5	—180		60/5"	29	

SITE: West Seattle Freeway Bridge Replacement, S.W. Spokane Street.

GROUND ELEVATION: 5.5'

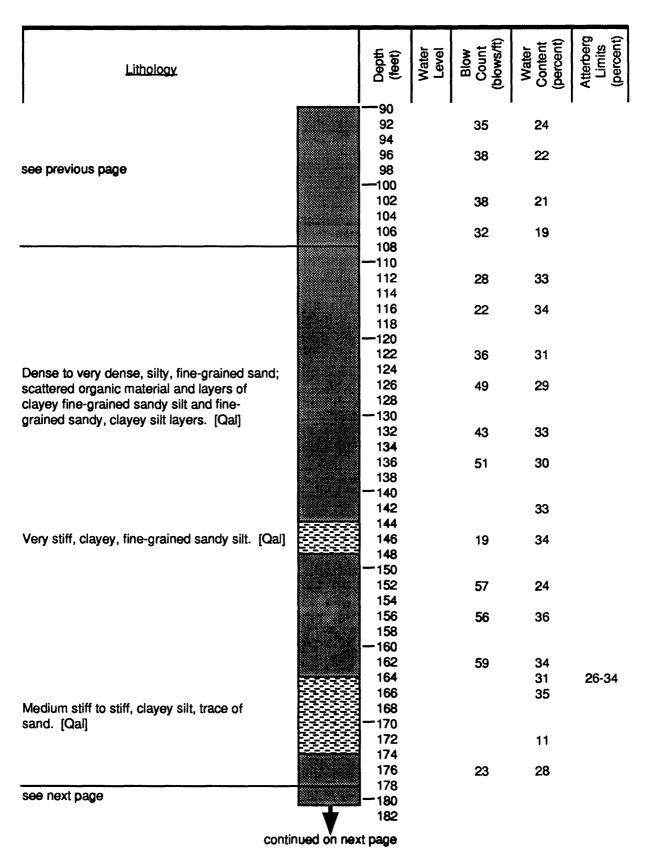
INVESTIGATOR: Shannon and Wilson, Inc., log of boring WS-10.

<u> </u>			,		 	
<u>Lithology</u>		Depth (feet)	Water Level	Blow Count (blows/ft)	Water Content (percent)	Atterberg Limits (percent)
Loose to medium dense, slightly silty, fine- to medium-grained sand, a trace ofgravel; scattered debris and organic material. [af]		— 0 2 4 6 8 —10 12	<u>∑</u>	64 14 5	11 6 23 10 29	
Medium dense, slightly silty,		14 16 18 —20	4/24/80, 8/26/80 4 	16 14 10	30 28 35	
fine- to medium-grained sand; scattered organic material. [Qal]		22 24 26 28 —30	4/24/	11 12 11 15	32 33 30 31	
		32 34 36 38		38 27 33 44	23 22 22 26	
		40 42		25	32	
Similar to above except medium dense		44 46 48		61	21	
to dense; scattered very thin fine- grained sandy silt layers. [Qal]		50 52 54		24	35	
gramos caney one layoro. [dai]		56 58		14	49	
		- 60 62			35 35	
		64 66		40	30	
	1	68 70		40	30	
		72 74		34	35	
		76 78		30	29	
		- 80 82 84		30	29	
	+	86 88 90 92		49	22	
con	tinued on nex	t page				

NUMBER: 79039 (cont.)

SITE:

GROUND ELEVATION:



NUMBER: **79039 (cont.)**

SITE:

GROUND ELEVATION:

			_			
<u>Lithology</u>		Depth (feet)	Water Level	Blow Count (blows/ft)	Water Content (percent)	Atterberg Limits (percent)
Dense, silty fine-grained sand; scattered gravel, organic material and very thin		-180 182 184		44	24	
clayey silt layers. [Qal]		186 188		67	29	
		190 192 194		63/6"		
		196 198 200		89/11"	17	
		202 204		88	22	
		206 208 210		53/6"	26	
Hard, fine- to medium-grained sandy, silty, clay, trace of gravel; layers of sandy, clayey silt, and silty sand. [Qvr]		212 214 216		52/6"	23 26	
		218 —220		53/6"	21	
		222 224 226		50/1"		
		228 230 232		56/6"		
		234 236 238		50/3"	30	
		240 242		50/0*		
Very dense, gravelly, clayey, silty, fine- to medium-grained sand. [Qvt]	* A A A A A A A A A A A A A A A A A A A	244 246 248		52/1"	14	
	T.D. 250.4	250		50/5"	15	

SITE: West Seattle Freeway Bridge Replacement, S.W. Spokane Street. GROUND ELEVATION: 8'

INVESTIGATOR: Shannon and Wilson, Inc., log of boring WS-15.

							
Lithology		Depth (feet)	Water Level	Blow Count (blows/ft)	Water Content (percent)	Atterberg Limits (percent)	
Soft, fine- to medium-grained sandy, silty clay; scattered gravel, organic material and debris. [af]	545476436436	0 2 4 6 8		4 3 17	24 8		
Medium dense, slightly silty, fine- to medium- grained sand; scattered gravel and organic material. [af]			3/26/80, 4/24/80 1 <mark> </mark>	33 17 22 8 26 15 13	8 28 28 43 27 30 25 25		
		32 34 36 38		12 34 30 34	30 26 25 23		
		40 42		27	29		
Similar to above except dense; scattered thin clayey silt and sandy		44 46 48		3 0	27		
silt layers. [Qal]		 50			37		
		52 54			40		
		56 58 60		37	55		
		62 64		33	24		
Interbedded, medium dense, silty, fine- grained sand and stiff to very stiff, slightly clayey, fine-grained sandy silt; scattered organic material. [Qal]		66 68 70		16	33		
		72		10	39		
		74 76 78			33		
		80 82 84		13	35		
		86 88		25	33		
	4	90 92					
continued on next page							

NUMBER: 79040 (cont.)

SITE:

GROUND ELEVATION:

Lithology		Depth (feet)	Water Level	Blow Count (blows/ft)	Water Content (percent)	Atterberg Limits (percent)
Interbedded, medium dense, silty, fine-grained sand and stiff to very stiff, slightly clayey, fine-grained sandy silt; scattered organic material. [Qal]		90 92	•	27	32	•
		94 96 98		24	30	
		100 102		32	45	
		104 106 108		28	34	
		110 112		48	29	
		114 116 118			33	
		120 122 124		14	35	
		126 128		23	31	
Stiff to hard, slightly clayey to clayey, fine-		130 132 134		12	37	
grained sandy silt; scattered very thin silty sand layers, organic material and wood fragments. [Qal]		136 138		35	28	
		140 142 144		19	34	
Dense to very dense, silty fine-grained sand; numerous hard, clayey, fine-grained sandy silty layers below 170°, and scattered organic material and shell fragments. [Qal]		146 148			27	
		150 152 154		59	27	
		156 158 —160		65	28	
		162		47	26	
		164		45	45	
		166 168		47		
		 170		_		
		172 174		79	35	
		176		49	31	
		178				
	T	180 182				
cor	itinued on nex					

NUMBER: **79040 (cont.)**

SITE:

GROUND ELEVATION:

Lithology		Depth (feet)	Water Level	Blow Count (blows/ft)	Water Content (percent)	Atterberg Limits (percent)
see previous page		─180 182	•	53	33	
Stiff, fine-grained sandy, clayey silt. [Qal]		184 186 188		15	32	
Very dense, gravelly, clayey, silty, fine-to medium-grained sand. [Qvr] Hard, fine- to medium-grained, sandy, silty clay, trace of gravel. [Qvr]		190 192		31/2"	13	
		194 196 198			15	15-28
		200 202		51/5*	13	
		204 206		53/5"		
		208 210 212		52/3"	12	
		214 216		52/6"		
		218 220 222		51/3"		
		224 226				
	T.D. 230.5	228 230		53/6"	19 17	

SITE: West Seattle Bridge Replacement, S.W. Spokane Street.

GROUND ELEVATION: 7.5'

INVESTIGATOR: Shannon and Wilson, Inc., log of boring WS-16.

Lithology		Depth (feet)	Water Level	Blow Count (blows/ft)	Water Content (percent)	Atterberg Limits (percent)
Medium dense, slightly silty, fine- to medium-grained sand; scattered gravel, organic material, shell fragments, and silty, fine-grained sand layers. [af]		- 0 2 4 6 8 10	•	16 8 11	10 9 7	
		12 14 16 18 20		15 15 11	9 19 37 28 33	
Medium dense, slightly silty, fine- to medium-grained sand; scattered gravel, organic material, shell fragments, and silty, fine-grained sand layers. [Qal]		22 24 26 28 —30		12 12 31	43 28 35 26	
		32 34 36 38 — 40		20 27 25 28	31 25 24 24	
		42 44 46 48		22 27	37 25	
		50 52 54		16	34	
	i de	56 58 60 62		49 23	24 40	
Stiff to very stiff, slightly clayey, fine-grained sandy silt; scattered organic material and very thin clayey silt and silty sand layers. [Qal]		64 66 68 — 70		24	36	
		72 74 76 78		14	37 37	
		80 82 84 86		22 47	36 30	
	T	88 — 90 92		••		
CC	ontinued on ne	xt page				

NUMBER: **79041 (cont.)** SITE:

GROUND ELEVATION:

INVESTIGATOR:

Lithology	Depth (feet)	Water Level	Blow Count (blows/ft)	Water Content (percent)	Atterberg Limits (percent)
	90 92 94		24	33	
Interbedded, dense to very dense, silty	96 98		30	37	
fine-grained sand and slightly silty fine- to medium-grained sand; scattered organic material, shell fragments, and very thin	—100 102 104		78	28	
clayey silty layers. [Qal]	106 108		39	33	
Very stiff, slightly clayey, fine-grained	—110 112 \$\$\$\$ 114		38	28	
sandy silt. [Qal]	116 118		20	3 6	
Interbedded, dense to very dense, silty	120 122 124			28 38	
fine-grained sand and slightly sitly fine- to medium-grained sand; scattered organic material, shell fragments, and	126 128		35	37	
very thin clayey silty layers. [Qal]	-130 132 134		54	27	
Hard, slightly clayey, fine-grained sandy silt;	136 138		46	25	
scattered wood fragments and very thin silty sand layers. [Qal]	—140 142 144		48	34	
Very stiff to stiff, fine-grained sandy, clayey silt; scattered organic material, shell and	146 148		25	38	
wood fragments. [Qal]	150 152 154		12	36	
	156 158 —160		51	28	
Dense, silty fine-grained sand; scattered organic material and very thin clayey	162 164		37	32	
silt layers. [Qal]	166 168 —170		51	29	
	172 3555 174			27	
Hard, clayey, fine-grained sandy silt. [Qal]	176 178 ———————————————————————————————————		47	40	
see next page.	182 I on next page				
Sommon	. on hear page				

NUMBER: **79041 (cont.)** SITE:

GROUND ELEVATION:

INVESTIGATOR:

Lithology		Depth (feet)	Water Level	Blow Count (blows/ft)	Water Content (percent)	Atterberg Limits (percent)
		180 182 184		62	32	
Dense, silty fine-grained sand; scattered organic material and very thin clayey silt		186 188		54/6"	25	
layers. [Qal]		190 192 194		52/5"	44	
	35555	196 198		50/6"	31	
Hard, slightly clayey, fine-grained sandy silt; scattered organic material and shell fragments. [Qal]		200 202 204		64	29	
		206 208		47	31	
		210 212 214			29	
No. 2 To the Control of the Control		216 218		44	30	
		220 222		53/6"	8	
		224 226 228		53/3*	11	
Hand on the Car Ar walling		230 232		53/5"	12	
Hard, gravelly, fine- to medium- grained sandy, silty clay. [Qvr]	Company of the compan	234 236 238		52/3"	15	
	The state of the s	-240 242 244		50/2"	12	
		246 248			13	
	T.D.250.9'	-250		50/4"	17	

SITE: West Seattle Freeway Bridge Replacement, S.W. Spokane Street. GROUND ELEVATION: 5'

INVESTIGATOR: Shannon and Wilson, Inc., log of boring WS-18.

<u>Lithology</u>	Depth (feet)	Water Level	Blow Count (blows/ft)	Water Content (percent)	Atterberg Limits (percent)			
Loose, silty, fine- to medium-grained	<u> </u> -0	1	1		1			
sand; scattered gravel, organic material and	2		-					
shell fragments. [af]	4 6		7 12	15 6				
Loose to medium dense, slightly silty, fine- to medium-grained sand; scattered	8		12	12				
organic material, wood fragments, and very	 10		40	40				
thin siltysand, fine-grained sandy silt and	12 14		1 3 7	19 34				
clayey silt layers. [Qal] Medium stiff, slightly clayey silt. [Qal]	16		5	5 7				
Loose to medium dense, slightly silty, fine-	18 20			06				
to medium-grained sand, scattered organic	22			36 41				
material, wood fragments, and very thin silty sand and fine-grained sandy silt layers. [Qal]	24		6	24				
Sand and line-grained sandy sitt layers. [Qai]	26 28		17 39	28 23				
	— 30		39	23				
	32		28	45				
	34 36		26 25	25 24				
Medium dense to dense, silty fine-grained	38		48	21				
sand; scattered organic material, wood	— 40							
fragments, and very thin silty sand, fine-	42 44		21	32				
grained sandy silt and clayey silt layers. [Qal]	46		14	37				
	48 50							
	50 52		76	25				
	54							
	56 58		30	24				
Medium dense to dense, silty fine-grained	- 60							
sand; scattered organic material and very thin to thin layers of slightly silty sand, sandy	62		34	33				
silt, and clayey sandy silt. [Qal]	64 66		19	34				
	68		13	34				
Very stiff, slightly clayey, fine-grained	一 70			37				
sandy silt; thin interbeds of silty sand. [Qal]	72 74			37 31				
	76		26	33				
	78 — 90							
Medium dense to dense, silty fine-grained	- 80 82		41	30				
sand; scattered organic material and very thin to thin layers of slightly silty sand, sandy	84							
silt, and clayey sandy silt. [Qal]	86 80		18	35				
	88 90							
▼	92							
continued on next page								

NUMBER: 79042 (cont.)

SITE:

GROUND ELEVATION:

INVESTIGATOR:

						
<u>Lithology</u>		Depth (feet)	Water Level	Blow Count (blows/ft)	Water Content (percent)	Atterberg Limits (percent)
noo provinuo paga		90 92	•	19	33	
see previous page.		94 96 98		28	32	
Stiff, slightly clayey, fine-grained sandy silt. [Qal]		100 102		15	38	
		104 106		26	38	
		108 110				
		112 114		63	35	
Medium dense to dense, silty fine-grained sand; scattered organic material and very thin to thin layers of slightly silty sand, sandy silt, and clayey sandy silt. [Qal]		116 118		25	30	
		120 122 124		26	36 38	
		126 128			43 41	
		130 132		23	41	
		134 136		41	34	
		138 140 142		10/6"	39	
Stiff to very stiff, slightly clayey, fine- grained sandy silt. [Qal]		144 146		19	38	
granied saidy sin. [dai]		148 150				
		152 154		14	33	
Very dense, slightly silty, fine- to medium-		156 158 —160			27	
grained sand; scattered organic material and very thin sandy clayey silt layers. [Qal]		162 164		72/11"	26	
		166 168		85	24	
Soft to stiff, slightly clayey, fine-grained sandy silt. [Qal]		-170 172		10/6"	37	
see next page.		174 176 178		37	37	
	4	180 182				
con	tinued on nex					

NUMBER: **79042 (cont.)** SITE: GROUND ELEVATION: INVESTIGATOR:

Lithology		Depth (feet)	Water Level	Blow Count (blows/ft)	Water Content (percent)	Atterberg Limits (percent)
Lithology		2 €	ا يە ق	ଅ ୪ ନୁ	Co K	Pe Li Affe
1		180				
		182		24	35	
		184				
		186		7 7	30	
		188				
		190 192		51	32	
		194		91	32	
		196			29	
		198				
Medium dense to very dense, silty fine-		200		_	_	
grained sand; scattered organic material		202		50	34	
and very thin to thin fine-grained sandy and slightly clayey silt layers. [Qal]		204 206		42	29	
and original orayof sin rayors. [Car]		208		72	23	
		-210				
		212		57	25	
		214				
		216		58	30	
		218 220				
		222		40	32	
		224				
		226		0/2.0'		
Hard, slightly clayey, fine-grained sandy		228				
silt; scattered organic material, shell		230 232		20	04	
fragments and very thin silty sand layers. [Qvr]		232		38	31	
		236		34	36	
	4444	238				
		-240				
	4444	242		21	32	
		244 246		10/6"	26	
	44444	246 248		10/6"	36	
Interhadded you self to your		—250				
Interbedded, very soft to very stiff, silty clay and clayey, fine-grained	00000	252		23	22	
sandy silt; scattered to rumerous shell		254				
fragments and organic material. [Qvt]		256		0/1.5'	49	29-59
	44444	258 260				
	00000	262			32	
		264			UŁ	
	-	266		0/1.5'	30	
see next page.	00000	268				
Tool Hort page.	T	-270				
	V	272				
conti	nued on ne	kt page				

NUMBER: 79042 (cont.)

SITE:

GROUND ELEVATION:

INVESTIGATOR:

Lithology		Depth (feet)	Water Level	Blow Count (blows/ft)	Water Content (percent)	Atterberg Limits (percent)
Very stiff, fine- to medium-grained sandy, silty clay; scattered shell fragments and hard clay fragments. [Qvt]	20000	270 272 274	•		29	
Hard, silty clay; scattered very thin		276 278 —280		37	26	
sand layers. [Qvt]	T.D. 285'	282 284 286		78 60/0 "	20	

SITE: West Seattle Freeway Bridge Replacement, S.W. Spokane Street. GROUND ELEVATION: 3.5'

INVESTIGATOR: Shannon and Wilson, Inc., log of boring WS-21.

<u>Lithology</u>		Depth (feet)	Water Level	Blow Count (blows/ft)	Water Content (percent)	Atterberg Limits (percent)		
Very dense, slightly silty, fine- to medium-grained sand. [af]		— 0 2 4	•	50/6"	14	•		
Medium dense to loose, slightly clayey, silty, gravelly sand. [af]	0:0:0:0:0:0:0 0:0:0:0:0:0:0 0:0:0:0:0:0	6 8		13 7	21			
Very soft to stiff, clayey silt; trace of sand and scattered organic material. [Qal]		—10 12 14		2/ 6" 1/6 " 0/1'	49 42 34			
Very loose, slightly silty to silty, fine- to medium- grained sand: organic material. [Qal]		16 18 20		2	54 37			
Loose to medium dense, slightly silty, fine- to medium-grained sand; scattered organic material. [Qal]		22 24 26 28		17 7 26 5	39 35 35 37			
Dense to very dense, slightly silty, fine- to		30 32 34		32 38	26 31			
		36 38 40		33 49	27 23			
		42 44		52	27			
medium-grained sand; scattered organic material. [Qal]		46 48 — 50		58	39			
		52 54		47	26			
		56 58 — 60		53	28			
		62 64		50	25			
Stiff, fine sandy, clayey silt that grades to slightly sandy silt with depth; scattered		66 68 — 70		24	37	27-34		
organic material. [Qal]		72 74			36			
		76 78		8	38			
Medium dense, silty fine sand; scattered organic material and very thin slightly clayey,		80 82 84		15	34			
fine sandy silt layers. [Qal] see next page.	22.23.23.23.23.23.23.23.23.23.23.23.23.2	86 88		15	39			
SOC HOAL Page.	V	- 90 92						
continued on next page								

NUMBER: **79043 (cont.)** SITE:

GROUND ELEVATION:

INVESTIGATOR:

Lithology		Depth (feet)	Water Level	Blow Count (blows/ft)	Water Content (percent)	Atterberg Limits (percent)
Medium stiff, clayey, fine sandy silt; scatterd		9 0	1 :			l
organic material and thin silty sand layers. [Qal]		92		8	3 9	
Very stiff, clayey, fine sandy silt; scattered		94				
organic material and very thin silty sand		96		26	35	
lavers. [Qal]		98				
		100				
		102			28	
		104		85	22	
Very dense, slightly silty, fine- to medium-		106 108		63	22	
grained sand; scattered organic material		— 110				
and very thin slightly clayey, fine sandy silt layers. [Qal]		112		65	25	
		114				
		116		51	25	
		118				
		120				
		122		51/6"	22	
		124				
		126		55	33	
		128				
		 130		00	07	
		132 134		39	27	
Interhadded very dense elightly situate		136		32	30	
Interbedded: very dense, slightly silty to silty fine sand and very stiff to hard, clayey		138)L	00	
fine sandy silt; scattered organic material. [Qal]		—140				
ine saidy sit, seattered organic material. [can]		142		51	28	
		144		-		
		146		75	34	
		148				
		—150		_		
		152		15	36	
		154			07	
Stiff to soft, clayey fine sandy silt; scattered		156 158			37	
organic material and shell fragments. [Qal]		—160				
		162		3/6"	36	
		164		0/0	00	
		166		52/5"	28	
Very dense, slightly silty fine sand; scattered organic material, shell fragments, and very thin clayey sandy silt layers. [Qvr]		168				
		一170				
		172		50	27	
,,,,, (a)		174				
		176		52/4"	27	
see next page.		178				
. •	T	180				
	. 🔻	182				
conti	nued on nex	ct page				

NUMBER: 79043 (cont.)

SITE:

GROUND ELEVATION:

INVESTIGATOR:

Lithology	Depth (feet)	Water Level	Blow Count (blows/ft)	Water Content (percent)	Atterberg Limits (percent)
Very dense, slightly silty, gravelly, fine- to	- 180 - 180		•	'	'
coarse-grained sand; scattered shell	182		55/5"	28	
fragments. [Qvr]	수취 184				
4444	186		50/6"		
	수석 188				
444	<u></u>		55/3"	13	
Lloyd fine to account a state along (Out)	수 석 192				
Hard, fine to coarse, gravelly, silty clay. [Qvt]	194				
	수석 196			13	
4444	ិ្ធិ 198			17	
<u>Гаала</u> Т. D. 20	소시200 10.3'		60/3"	15	

SITE: 16' NW of centerline Sunset Ave SW, 80' S of centerline SW Walker St.

GROUND ELEVATION: 250'

INVESTIGATOR: Seattle Engineering Department; B-05812.

Lithology		Depth (feet)	Water Level	Blow Count (blows/ft)	Water Content (percent)	Atterberg Limits (percent)
Firm to compact; clean, fine- to medium- grained sand, and silty sand layers. [Qva]		— 0 2 4		19		•
Firm to compact, clean fine- to medium- grained sand. [Qva]		6 8		21		
Firm to compact; clean, fine- to medium- grained sand, traces of layered silty sand. [Qva]		—10 12 14		34		
Firm to compact; clean, mediun-grained sand, silty sand at bottom. [Qva]		16 18		14		
Firm to compact; clean, fine- to medium- grained sand. [Qva]		20 22 24 26 28		18		
	T.D. 30'	-30		37		

NUMBER: 80002

SITE: Walnut Avenue SW and Lander, Seattle.

GROUND ELEVATION: 325'

INVESTIGATOR: Seattle Engineering Department; B-05731.

Lithology	:	Depth (feet)	Water Level	Blow Count (blows/ft)	Water Content (percent)	Atterberg Limits (percent)
Loose sand. [Qva]		0 2 4	•	12		
Compact sand; silt layers and trace of gravel. [Qva]		6 8 —10		42		
Very compact sand and gravel. [Qva]	7. D. 15	10 12 14 16		53		

SITE: 25' W of centerline S. Admiril Way, 85' W. of centerlin 59 th SW.

GROUND ELEVATION: 50'

INVESTIGATOR: Seattle Engineering Department; B05750.

Lithology		Depth (feet)	Water Level	Blow Count (blows/ft)	Water Content (percent)	Atterberg Limits (percent)
Loose sand with silt, gravel, and trace of organic material. [Qva]		一 0 2 4		7		
Loose sand with silt, gravel, and trace of organic material. [Qva]		6 8 10		4		
Loose sand with silt, clay, and trace of gravel. [Qva]		10 12 14		8		
Firm sand and silty clay with gravel. [Qva]	D. 20'	16 18 2 0		16		

NUMBER: 80004

SITE: 170' W. of centerline 53 rd Avenue SW, 15' NE of centerline SW Manning.

GROUND ELEVATION: 337'

INVESTIGATOR: Seattle Engineering Department; B-05748.

Lithology		Depth (feet)	Water Level	Blow Count (blows/ft)	Water Content (percent)	Atterberg Limits (percent)
Very stiff, silt with clay and trace of sand. [Qvr]		- 0 2 4		51		
Very compact, gravel, sand and trace of silt. [Qvt]	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	6 8		58		
very compact, sand and silt; fine gravel. [Qvt]	T. D. 15'	—10 12 14 16		73		

SITE: 25' N. of centerline Beach Dr. SW, 20' S. of centerline SW Carroll St..

GROUND ELEVATION: 25'

INVESTIGATOR: Seattle Engineering Department; B-05748.

<u>Lithology</u>	Depth (feet)	Water Level	Blow Count (blows/ft)	Water Content (percent)	Atterberg Limits (percent)
Loose, medium-grained sand; traces of silt. [Qal]	0 2 4		8		
Loose, medium-grained sand; traces of silt. [Qal]	6 8		7		
Firm, well-graded sand, fine gravel and traces of silt. [Qg]	—10 12 14		18		
Very compact, gravel, sand, and traces of silt. [Qg] T. D.	16 18 20' — 20 20'		50/6"		

NUMBER: 80006

SITE: SW Dakota and 46 th Avenue SW.

GROUND ELEVATION: 312'

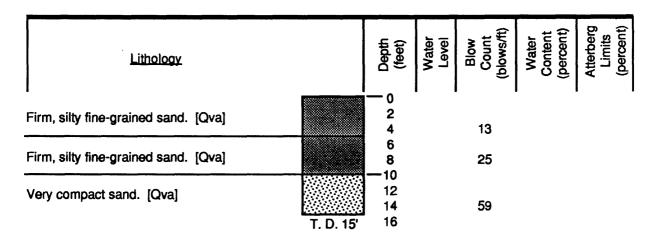
INVESTIGATOR: Seattle Engineering Department; B-05784.

Lithology	Depth (feet)	Water Level	Blow Count (blows/ft)	Water Content (percent)	Atterberg Limits (percent)
Loose silty sand. [Qva]	- 0 2 4	•	2		
Firm fine-grained sand with clay and silt layers. [Qva]	6 8 —10		15		
Compact fine-grained sand, fractured gravel and silt. [Qva]	12 14		61(rock ?)		
Compact fine-grained sand. [Qva]	16 18 20		36		

SITE: 44 th Avenue SW and SW Oregon.

GROUND ELEVATION: 325'

INVESTIGATOR: Seattle Engineering Department; B-05778.



NUMBER: 80008

SITE: 12' S. of centerline Brandon, 280' W. of centerline 18 th Street.

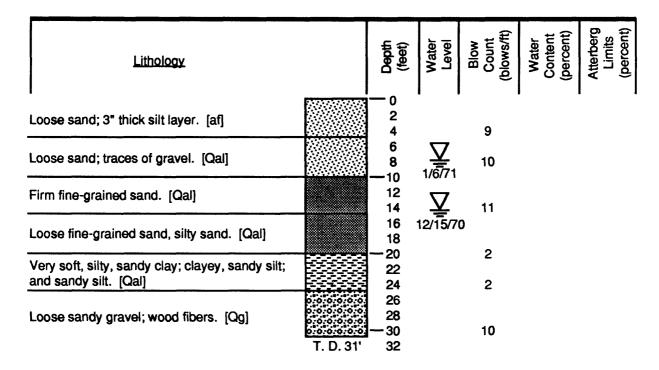
GROUND ELEVATION: 225'

INVESTIGATOR: Seattle Engineering Department; B-06225.

Lithology		Depth (feet)	Water Level	Blow Count (blows/ft)	Water Content (percent)	Atterberg Limits (percent)
Medium dense silt to very fine grained sand. [Qvr]		— 0 2 4	•	9		
Stiff clayey silt; occasional gravel. [Qvr]		6 8		20		
Very stiff silt and gravel. [Qvt]	7. D. 14.5	—10 12 14 16		50/5"		

SITE: Harbor Avenue SW. GROUND ELEVATION: 25'

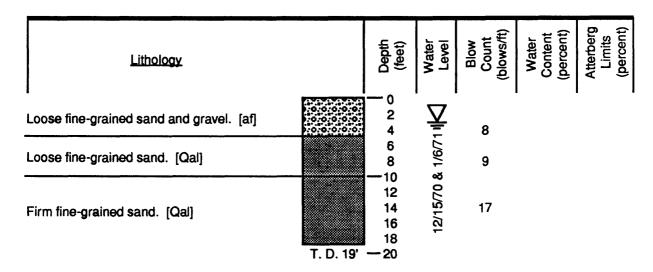
INVESTIGATOR: Seattle Engineering Department; B-06292.



NUMBER: **80010**

SITE: Harbor Avenue SW. GROUND ELEVATION: 25'

INVESTIGATOR: Seattle Engineering Department; B-06292.



SITE: Harbor Avenue SW. GROUND ELEVATION: 50'

INVESTIGATOR: Seattle Engineering Department; B-06293.

Lithology		Depth (feet)	Water Level	Blow Count (blows/ft)	Water Content (percent)	Atterberg Limits (percent)
Loose, very fine to fine-grained sand. [af]		0 2 4	•	2		•
Loose, slightly silty fine-grained sand; wood and clay lumps. [af]		6 8 10	$\bar{\underline{\nabla}}$	6		
Loose, silty fine-grained sand. [af]	e de la companya de l	12 14	12/15/701 	1		
Firm silt; rock chips. [Qn]		16 18	5	13		
Medium dense clayey silt; clay lumps. [Qn]		20 22 24		9		
Firm silt and clayey silt; clay lumps. [Qn]	T. D. 30'	26 28 —30		16		

NUMBER: 80012

SITE: Harbor Avenue SW. GROUND ELEVATION: 75'

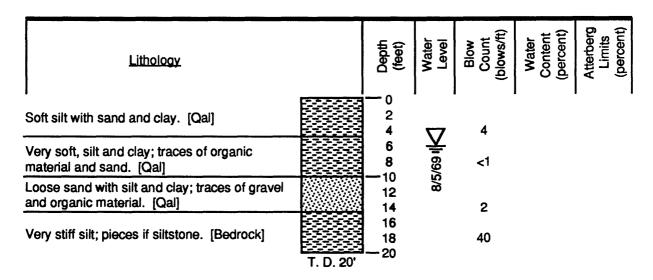
INVESTIGATOR: Seattle Engineering Department; B-06293.

Lithology		Depth (feet)	Water Level	Blow Count (blows/ft)	Water Content (percent)	Atterberg Limits (percent)
Loose, silty fine-grained sand. [Qva]		— 0 2 4	•	4		
Soft silt and clay. [Qva]		6 8		4		
Soft clay and silt. [Qva]		—10 12 14		5		
Medium dense clayey silt. [Qva]		16 18 20		12		
		22 24 26		12		
Medium dense clayey silt; clay lumps. [Qva]	T. D. 30'	28 30		13		

SITE: 20' S. of centerline SW Admiril Way, 75'W of centerline 65 th Avenue S...

GROUND ELEVATION: 25'

INVESTIGATOR: Seattle Engineering Department; B-05743.



NUMBER: 80014

SITE: 35' S. of centerline Alki Avenue S., 30' E. of centerline 64 PI SW.

GROUND ELEVATION: 0'

INVESTIGATOR: Seattle Engineering Department; B-05743.

Lithology		Depth (feet)	Water Level	Blow Count (blows/ft)	Water Content (percent)	Atterberg Limits (percent)
Firm sand with gravel. [Qn]		— 0 2 4		29		
Very compact gravel with well-graded sand. [Qg	0.0.0.0.0.0.0.0.0.0.0.0.0.0.0.0.0.0.0.	6 8 —10		72		
Compact sand with gravel and traces of silt. [Qg	T. D. 15'	12 14 16	∑ 1 69/62/	46		

SITE: Th 1 - Point PI SW sewer project.

GROUND ELEVATION: 0'

INVESTIGATOR: Seattle Engineering Department; B-00298.

Lithology		Depth (feet)	Water Level	Blow Count (blows/ft)	Water Content (percent)	Atterberg Limits (percent)
Firm, mediu- to coarse-grained sand; fine- grained gravel and organic material. [Qal]		- 0 2 4		19		
Firm, medium- to coarse-grained sand; fine- grained gravel and organic material. [Qn]		6 8 —10	$\bar{\underline{\nabla}}$	25		
Soft, decomposing peat over 2" of medium- grained sand. [Qn]		12 14	≯ 119/62 1 ∤ 2	6		
Loose, layers of fine-, medium- and coarse- grained sand, and peat. [Qn]		16 18 — 20	7	4		
Firm, fine- to medium-grained sand; trace of fine-grained gravel. [Qn]		22 24		27		
Loose, 1/2" to 2" layers of peat and fine- and medium-grained sand. [Qn]		26 28 30		11		
Firm, fine- to coarse-grained sand; some fine-grained gravel and 1/8" layer peat. [Qn]		32 34		21		
Firm, medium- to coarse-grained sand; fine- grained gravel and peat. [Qn]	T. D. 38.6'	36 38 — 40		13		

NUMBER: 80016

SITE: 60' E. of centerline 62 nd Avenue SW, 30' S. of centerline Admiril Way.

GROUND ELEVATION: 12'

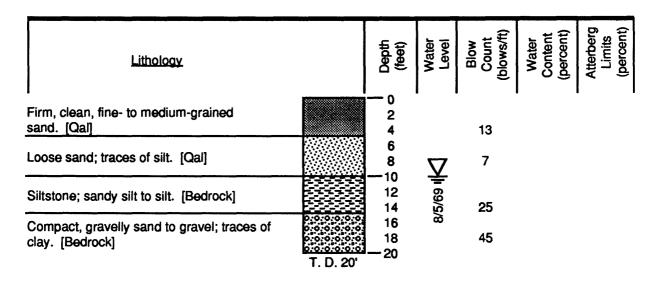
INVESTIGATOR: Seattle Engineering Department; B-05749.

Lithology		Depth (feet)	Water Level	Blow Count (blows/ft)	Water Content (percent)	Atterberg Limits (percent)
Loose sand; traces of silt and clay. [Qal]		— 0 2 4		7		
Loose sand; traces of silt and clay. [Qal]		6 8		8		
Firm sand; traces of silt, clay and gravel. [Qal]		—10 12 14		11		
Firm gravelly sand; traces of silt and clay. [Qn]	0.0.0.0.0.0	16 18 — 20	<u></u>	24		
	T. D. 20'		9/16/69			

SITE: 15' W. of centerline 62 nd Ave. SW, 50' N. of centerline SW Spokane St..

GROUND ELEVATION: 12'

INVESTIGATOR: Seattle Engineering Department; B-05749.



NUMBER: 80018

SITE: 25' E. of centerline Beach Dr. SW, 75' N. of centerlin SW Douglas Pl..

GROUND ELEVATION: 0'

INVESTIGATOR: Seattle Engineering Department; B-05746.

Lithology	Depth (feet)	Water Level	Blow Count (blows/ft)	Water Content (percent)	Atterberg Limits (percent)
Firm, clean, fine- to medium-grained sand. [Qal]	- 0 2 4	·	20	-	
Compact, well-graded sand with gravel. [Qg]	6 8		5 4		
Very compact, fine- to very fine grained sand; trace of silt. [Bedrock]	12 14		54 42		
T. D.	15' 16				

SITE: 15' S. of centerline SW Spokane ST., 2' E. of centerline 55 th St. SW.

GROUND ELEVATION: 300'

INVESTIGATOR: Seattle Engineering Department; B-05746.

Lithology		Depth (feet)	Water Level	Blow Count (blows/ft)	Water Content (percent)	Atterberg Limits (percent)
Loose, well-graded sand with gravel and silt. [Qva]	0:0:0:0:0:0:0 0:0:0:0:0:0:0	— 0 2 4	-	6	-	
Loose sand; traces of gravel and silt. [Qva]		6 8 —10		2		
Firm sand; traces of gravel and silt. [Qva]	T. D. 15'	—10 12 14 16		29		

NUMBER: 80020

SITE: Point PI SW sewer project. GROUND ELEVATION: 25'

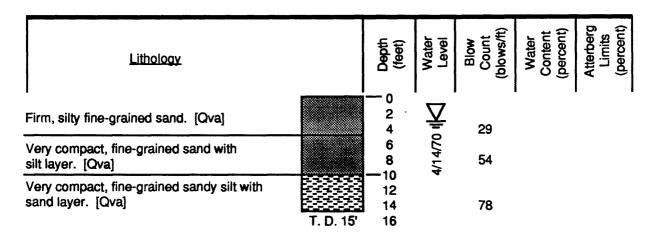
INVESTIGATOR: Seattle Engineering Department; B-00298.

Lithology		Depth (feet)	Water Level	Blow Count (blows/ft)	Water Content (percent)	Atterberg Limits (percent)
Firm, medium-grained sand with gravel to 3/4". [Qg]		- 0 2 4	•			
Firm, medium-grained sand with gravel to 3/4". [Qg]		6 8		21		
Firm, medium- to coarse-grained sand with gravel to 3/4". [Qg]		—10 12 14	∇	24		
Firm, medium- to coarse-grained sand with gravel to 3/4". [Qg]		16 18	7/18/62 4 	20		
Medium dense, silty sand; traces of fine- grained gravel, fine sand, and clay. [Qn]		20 22 24	7/18	11		
Firm, fine-grained sand and silt; traces of stratified clay. [Bedrock]	T. D. 28.5'	26 28 —30		52		

SITE: California Avenue SW and SW Raymond.

GROUND ELEVATION: 275'

INVESTIGATOR: Seattle Engineering Department; W. Seattle #7, B-05781.



NUMBER: 81002

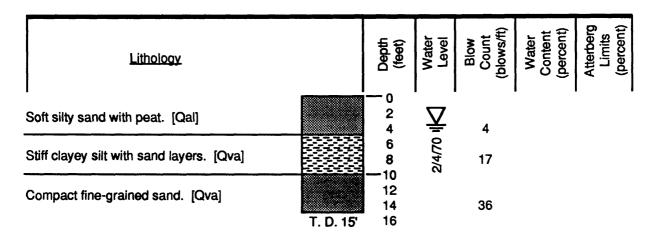
SITE: SW Genesee and 44 th SW. GROUND ELEVATION: 350'

INVESTIGATOR: Seattle Engineering Department; W. Seattle #8, B-05781.

Lithology		Depth (feet)	Water Level	Blow Count (blows/ft)	Water Content (percent)	Atterberg Limits (percent)
Compact fine-grained sand. [Qva]		0 2 4	•	33	'	'
Firm fine-grained sand. [Qva]		6 8 —10		27		
Firm fine-grained sand. [Qva]	T. D. 15'	—10 12 14 16		26		

SITE: SW Raymond and 46 th SW. GROUND ELEVATION: 225'

INVESTIGATOR: Seattle Engineering Department; W. Seattle, B-05785.



NUMBER: 81004

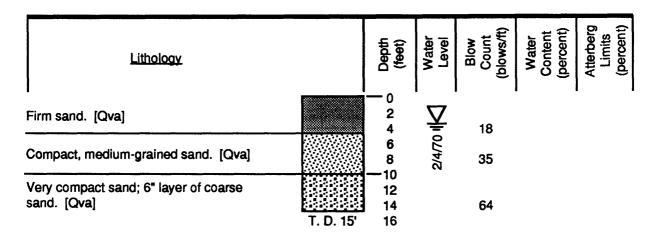
SITE: 47 th SW and SW Genesee. GROUND ELEVATION: 350'

INVESTIGATOR: Seattle Engineering Department; W. Seattle #16, B-05785.

Lithology		Depth (feet)	Water Level	Blow Count (blows/ft)	Water Content (percent)	Atterberg Limits (percent)
Firm, fine-grained sand with gravel and silt. [Qva]),0,0,0,0,0,0,0),0,0,0,0,0,0,0,0	0 2 4	•	24		
Compact, fine-grained sand. [Qva]		6 8		31		
Compact, fine-grained sand. [Qva]		—10 12 14		46		
Compact, fine-grained sand. [Qva]	T. D. 20'	16 18 —20		44		

SITE: SW Juneau and 48 th SW. GROUND ELEVATION: 200'

INVESTIGATOR: Seattle Engineering Department; W. Seattle #26, B-05791.

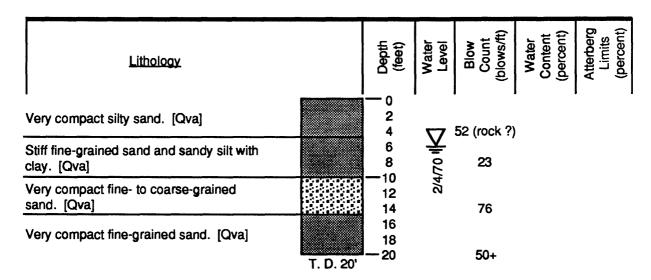


NUMBER: 81006

SITE: 49 th Ave SW and SW Raymond.

GROUND ELEVATION: 200'

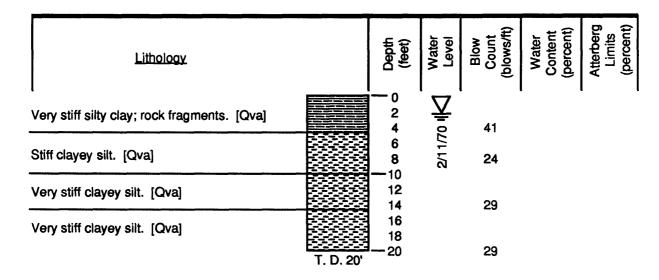
INVESTIGATOR: Seattle Engineering Department; W. Seattle #27, B-05791.



SITE: Beach Dr. SW and SW Juneau.

GROUND ELEVATION: 25'

INVESTIGATOR: Seattle Engineering Department; W. Seattle #39, B-05800.



NUMBER: 81008

SITE: Beach Dr. SW and SW Graham.

GROUND ELEVATION: 62'

INVESTIGATOR: Seattle Engineering Department; W. Seattle #40, B-05800.

Depth (feet)	Water Level	Blow Count (blows/ft)	Water Content (percent)	Atterberg Limits (percent)
- 0 2 4	•	50+		
6 8		68		
12 14		44		
16 18 20		43		
T. D. 20'	0 2 4 6 8 	0 2 4 6 8 	0 2 4 50+ 6 8 8 68 	0 2 4 50+ 6 8 68

SITE: Atlas PI SW and SW Graham.

GROUND ELEVATION: 125'

INVESTIGATOR: Seattle Engineering Department; W. Seattle #41, B-05801.

<u>Lithology</u>		Depth (feet)	Water Level	Blow Count (blows/ft)	Water Content (percent)	Atterberg Limits (percent)
Loose, silty, gravelly sand. [Qva]		- 0 2 4	•	5		
Loose, silty, gravelly sand. [Qva]		6 8		9		
Very compact, coarse-grained sand with gravel. [Qva]	T. D. 20'	—10 12 14 16		51		

NUMBER: 81010

SITE: Beach Dr. SW and SW Oregon.

GROUND ELEVATION: 12'

INVESTIGATOR: Seattle Engineering Department; W. Seattle #42, B-05801.

Lithology		Depth (feet)	Water Level	Blow Count (blows/ft)	Water Content (percent)	Atterberg Limits (percent)
Loose, fine-grained sand and clayey silt. [Qn]		0 2 4	•	7		
Firm clayey silt and fine-grained sand with gravel. [Qn]		6 8		18		
Very stiff silt and clay. [Qn]	T. D. 15'	10 12 14 16		50		

SITE: Seattle Kingdome. GROUND ELEVATION: 11.3'

INVESTIGATOR: Geolabs, Inc.; B-23.

Lithology		Depth (feet)	Water Level	Blow Count (blows/ft)	Water Content (percent)	Atterberg Limits (percent)
Wet, medium dense, silty, fine- to medium- grained sand. [af]		— 0 2	∇	00		
Medium dense, silty, fine- to medium- grained sand with organic debris. [af]	10.00	4 6 8	7	20 24 12		
Compact, silty, fine- to medium-grained sand. [Qvt]		—10 12 14		50 50/6"		
• •	T. D. 16.5'	16 18		50/5"		

NUMBER: 81012

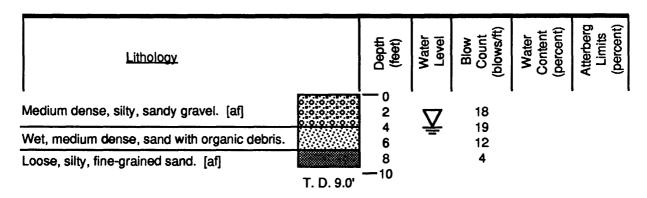
SITE: Seattle Kingdome. GROUND ELEVATION: 12.5'

INVESTIGATOR: Geolabs, Inc.; B-25.

Lithology		Depth (feet)	Water Level	Blow Count (blows/ft)	Water Content (percent)	Atterberg Limits (percent)
Loose, gravelly sand. [af]	202020202	— o		· _		
Loose to medium dense, silty sand. [af]		2 4 6		7 16 7		
Loose, clean sand. [af]	*********	8		8		
	T. D. 9.0'	 10				

SITE: Seattle Kingdome. GROUND ELEVATION: 14.4'

INVESTIGATOR: Geolabs, Inc.; B-27.



NUMBER: 81014

SITE: Seattle Kingdome. GROUND ELEVATION: 13.5'

INVESTIGATOR: Geolabs, Inc.; B-26.

Lithology		Depth (feet)	Water Level	Blow Count (blows/ft)	Water Content (percent)	Atterberg Limits (percent)
Medium dense, clean sandy gravel. [af]	0.0.0.0.0.0	— 0 2		25	'	,
Medium dense, silty, fine- to coarse sand. [af]		4	¥	23		
Loose, silty, gravelly sand. [af]		6 8		10 7		
	T. D. 9.0'	 10				

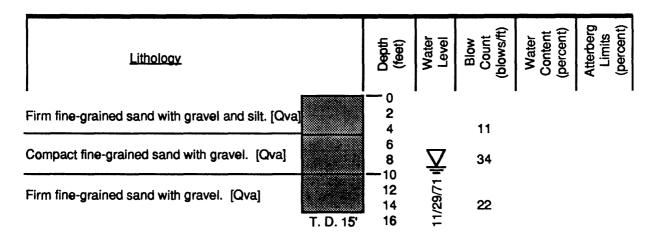
NUMBER: **81015**SITE: Seattle Kingdome.
GROUND ELEVATION: 11.3'
INVESTIGATOR: Geolabs, Inc.; B-24.

						
<u>Lithology</u>		Depth (feet)	Water Level	Blow Count (blows/ft)	Water Content (percent)	Atterberg Limits (percent)
Medium dense, silty, medium- to coarse- grained sand. [af]		— 0 2 4	` <u>\</u> \	18		•
Wet, loose, fine- to medium-grained sand with silt lenses, organic debris and shell fragments. [af]		6 8 		10 12 8 50/5" 50/3" 50/1"		
Soft to medium dense, silt with shell fragments. [Qal]		22 24 26 28 —30 32 34 36		push 8 push push		
Wet, very dense, silty, clayey, fine- to medium-grained sand grading into silty gravel. [Qvt]		38 40 42 44 46		50/6" 50/5"		
		48 50 52 54 56 58		62/12" 52/6" 50/5"		
Very dense, slightly silty, fine- to coarse- grained sand with lenses of very coarse sand and pea gravel. [Qva]		60 62 64 66 68		50/6" 50/5"		
T	D. 78.5	70 72 74 76 78 80		55/6" 52/6"		

SITE: SW Frontenac and California Avenue SW.

GROUND ELEVATION: 237'

INVESTIGATOR: Seattle Engineering Department; W. Seattle #30, B-07059.



NUMBER: 81017

SITE: SW Frontenac and 40 th SW.

GROUND ELEVATION: 350'

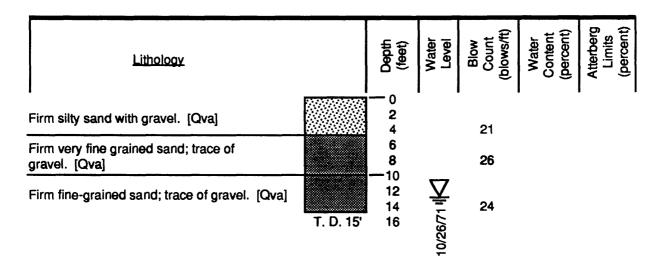
INVESTIGATOR: Seattle Engineering Department; W. Seattle #31, B-07059.

Lithology	Depth (feet)	Water Level	Blow Count (blows/ft)	Water Content (percent)	Atterberg Limits (percent)
Loose fine-grained sand with gravel. [Qva]	0 2 4		3		
Loose, silty fine-grained sand with gravel. [Qva]	6 8		3		
Firm, silty fine-grained sand with gravel. [Qva]	-10 12 14		16		
T. D.	15' 16				

SITE: Fauntleroy Way SW and 41 st Avenue SW.

GROUND ELEVATION: 275'

INVESTIGATOR: Seattle Engineering Department; W. Seattle #36, B-07062.



NUMBER: 81019

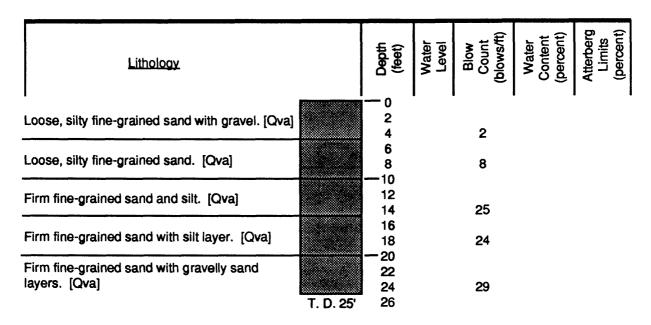
SITE: SW Holly and 40 th SW. GROUND ELEVATION: 325'

INVESTIGATOR: Seattle Engineering Department; W. Seattle #37, B-07062.

Lithology		Depth (feet)	Water Level	Blow Count (blows/ft)	Water Content (percent)	Atterberg Limits (percent)
Firm sand with gravel. [Qva]		0 2 4	•	17		
Compact medium- to coarse-grained sand with gravel. [Qva]		6 8		48		
Very compact fine- to medium-grained sand with gravel. [Qva]	T. D. 15'	—10 12 14 16		52		

SITE: SW Juneau and 37 th SW. GROUND ELEVATION: 325'

INVESTIGATOR: Seattle Engineering Department; W. Seattle #50, B-07069.



NUMBER: 81021

SITE: SW Findlat between 40 th and 41 st Avenue SW.

GROUND ELEVATION: 325'

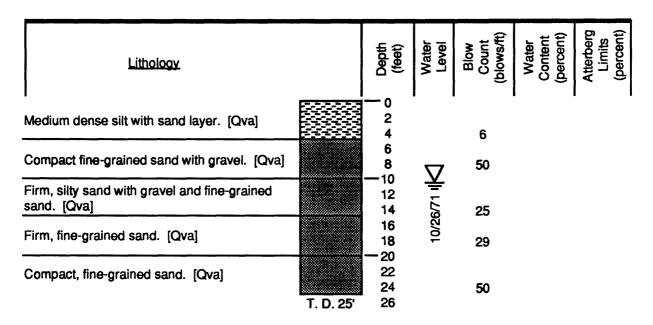
INVESTIGATOR: Seattle Engineering Department; W. Seattle #51, B-07069.

<u>Lithology</u>		Depth (feet)	Water Level	Blow Count (blows/ft)	Water Content (percent)	Atterberg Limits (percent)
Very compact, silty sand with gravel. [Qvt]	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 2 4	[100+	•	
Compact, fine-grained sand with medium- grained sand layers. [Qva]		6		43		
Very compact, fine-grained sand. [Qva]	T. D. 15'	—10 12 14 16		65		

SITE: Fauntleroy Way SW and SW Raymond.

GROUND ELEVATION: 275'

INVESTIGATOR: Seattle Engineering Department; W. Seattle #48, B-07068.



NUMBER: 81023

SITE: Fauntleroy Way SW and SW Juneau.

GROUND ELEVATION: 275'

INVESTIGATOR: Seattle Engineering Department; W. Seattle #49, B-07068.

Lithology		Depth (feet)	Water Level	Blow Count (blows/ft)	Water Content (percent)	Atterberg Limits (percent)
Loose, Silty sand with clay. [Qva]		- 0 2 4		10		
Firm, fine-grained sand with thin silt layers. [Qva]	e de la composition della comp	6 8		17		
Compact, silty sand with gravel. [Qva]	T. D. 15'	12 14 16		33		

SITE: 36 th Avenue SW and SW Raymond.

GROUND ELEVATION: 350'

INVESTIGATOR: Seattle Engineering Department; W. Seattle #46, B-07067.

Lithology	Depth (feet)	Water Level	Blow Count (blows/ft)	Water Content (percent)	Atterberg Limits (percent)
Firm silt to very fine grained sand with gravel and silt layers. [Qva]	— 0 2 4	•	17		
Very compact silt to very fine grained sand with gravel and sand seams. [Qva]	6 8		54		
Very compact silt to very fine grained sand with gravel and silt layers. [Qva]	—10 12 14 16	 	100+		

NUMBER: 81025

SITE: SW Raymond and 35 th SW. GROUND ELEVATION: 375'

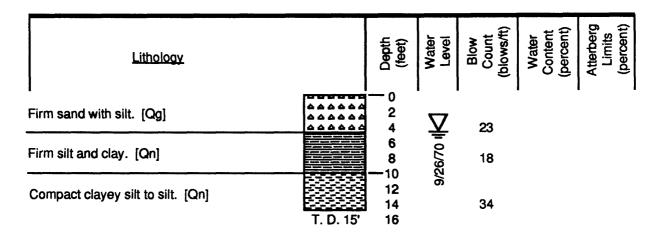
INVESTIGATOR: Seattle Engineering Department; W. Seattle #47, B-07067.

Lithology	Depth	(feet)	Water Level	Blow Count (blows/ft)	Water Content (percent)	Atterberg Limits (percent)
Very stiff fine-grained sand and clayey silt. [Qva]	**************************************	o ' 2 4	<u>,</u> Ž	34		ı
Very compact silty fine-grained sand with a trace of gravel. [Qva]		6 8	1277	67		
Very compact gravelly sand and silty fine- grained sand with gravel. [Qva] T. D.	1	0 2 4 6		73		

SITE: Fauntieroy Way SW and SW Austin.

GROUND ELEVATION: 175' (?)

INVESTIGATOR: Seattle Engineering Department; W. Seattle #12, B-05842.



NUMBER: 81027

SITE: 45 th Avenue SW and SW Webster.

GROUND ELEVATION: 225' (?)

INVESTIGATOR: Seattle Engineering Department; W. SEattle #13, B-05842.

Lithology		Depth (feet)	Water Level	Blow Count (blows/ft)	Water Content (percent)	Atterberg Limits (percent)
Medium dense silt; some sand and trace of organic material. [Qn]		— 0 2 4		9		
Medium dense clayey silt; trace of organic material. [Qn]		6 8 —10	∳! 0//11/6	8		
Medium dense silt and clay. [Qn]		12 14	9/1	10		
Firm silt and clay grading downward to silt. [Qn]		16 18		18		
Firm silt. [Qn]		20 22 24		23		
Firm silt and clay. [Qn]	T. D. 30'	26 28 —30		18		

SITE: SW Webster and 37 th SW. GROUND ELEVATION: 475'

INVESTIGATOR: Seattle Engineering Department; W. Seattle #26, B-05850.

Lithology		Depth (feet)	Water Level	Blow Count (blows/ft)	Water Content (percent)	Atterberg Limits (percent)
Very compact, silty sand with gravel. [Qvt]	44444	— 0 2 4	•	60		
Very compact, silty sand with gravel. [Qvt]	00000 00000 00000	6 8 —10		50+		
Very compact, silty sand with gravel. [Qvt]	T. D. 15'	—10 12 14 16		50+		

NUMBER: 81029

SITE: 37 th SW and SW Holden. GROUND ELEVATION: 450'

INVESTIGATOR: Seattle Engineering Department; W. Seattle #27, B-05850.

Lithology		Depth (feet)	Water Level	Blow Count (blows/ft)	Water Content (percent)	Atterberg Limits (percent)
Compact silty fine-grained sand with gravel and silt layer. [Qvt]	000000 000000	— 0 2 4	•	35		•
Very compact fine-grained sand with gravel and silt layer. [Qvt]	000000 00000 00000	6 8		95		
Very compact silty fine-grained sand with gravel. [Qva]	T. D. 15'	—10 12 14 16		50+		

SITE: SW Austin and 41 st Avenue SW.

GROUND ELEVATION: 375'

INVESTIGATOR: Seattle Engineering Department; W. Seattle #30, B-05852.

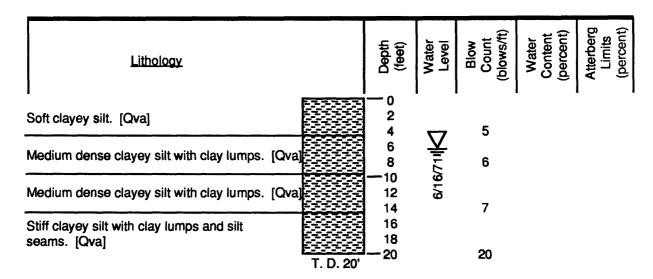
Lithology		Depth (feet)	Water Level	Blow Count (blows/ft)	Water Content (percent)	Atterberg Limits (percent)
Loose fine- to medium-grained sand with a trace of gravel. [Qva]		0 2 4	•	9		
Compact fine- to medium-grained sand with coarse-grained sand layer. [Qva]		6 8		31		
Compact fine-grained sand. [Qva]	T. D. 15'	—10 12 14 16		32		

NUMBER: 81031

SITE: 45 th SW and SW Cambridge.

GROUND ELEVATION: 125'

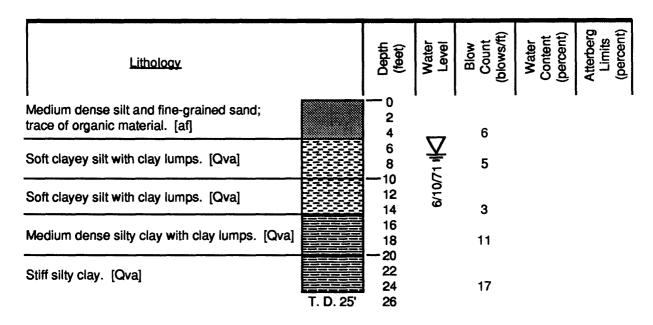
INVESTIGATOR: Seattle Engineering Department; W. Seattle #1, B-06936.



SITE: 44 th SW and SW Cambridge.

GROUND ELEVATION: 162'

INVESTIGATOR: Seattle Engineering Department; W. Seattle #2, B-06936.



NUMBER: 81033

SITE: Fauntleroy Way SW and SW Henderson Street.

GROUND ELEVATION: 25'

INVESTIGATOR: Seattle Engineering Department; W. Seattle #11, B-06942.

Lithology		Depth (feet)	Water Level	Blow Count (blows/ft)	Water Content (percent)	Atterberg Limits (percent)
Firm sand with gravel. [Qvr]		0 2 4	•	27		•
Compact sand with gravel. [Qvr]		6 8		40		
Compact gravelly sand. [Qvr]		—10 12 14		46		
Very compact gravelly sand. [Qvr]	T. D. 20'	16 18 — 20		61		

SITE: 35th Avenue SW and SW Rose Street.

GROUND ELEVATION: 387'

INVESTIGATOR: Seattle Engineering Department; W. Seattle #26; B-06592.

Lithology		Depth (feet)	Water Level	Blow Count (blows/ft)	Water Content (percent)	Atterberg Limits (percent)
Firm; silty sand with gravel. [af]		— 0 2 4		14		
Firm to medium dense; silty sand with gravel to silt with sand and gravel. [Qvr]		6 8 —10 12		14		
Firm to medium dense; silty sand with gravel. [Qvr]		14 16		36 (rock)		
Very compact; slightly silty sand with gravel. [Qvt]		18 20 22 24		58 61		
Very compact; clean, fine- to medium- grained sand with gravel. [Qvt]		26 28 —30		85+		
Very compact; clean, fine-grained sand. [Qva]	T.D. 35'	32 34		60		

NUMBER: 81035

SITE: 37 th Avenue SW and SW Barton Street.

GROUND ELEVATION: 300'

INVESTIGATOR: Seattle Engineering Department; W. Seattle #18, B-06947.

Lithology		Depth (feet)	Water Level	Blow Count (blows/ft)	Water Content (percent)	Atterberg Limits (percent)
Loose silt and sand with gravel. [Qal]		- 0 2 4		2		
Firm silty sand with gravel and sand seams. [Qvr]		6 8		21		
Very compact silty sand with gravel and sand seams. [Qvr]	T. D. 15'	—10 12 14 16		57		

SITE: 35 th Avenue SW and SW Barton Street.

GROUND ELEVATION: 325'

INVESTIGATOR: Seattle Engineering Department; W. Seattle #19, B-06947.

Lithology		Depth (feet)	Water Level	Blow Count (blows/ft)	Water Content (percent)	Atterberg Limits (percent)
Medium loose silt with occasional gravel and sand. [Qvr]		0 2 4		6		
Very compact silty sand with gravel and sand seams. [Qvt]	0 4 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6	6 8		59		
Very compact silty sand with gravel and sand seams. [Qvt]	7. D. 15'	—10 12 14 16		88+		

NUMBER: 81037

SITE: California Avenue SW and SW Henderson.

GROUND ELEVATION: 162'

INVESTIGATOR: Seattle Engineering Department; W. Seattle #45, B-06964.

Lithology		Depth (feet)	Water Level	Blow Count (blows/ft)	Water Content (percent)	Atterberg Limits (percent)
Loose fine-grained sand with gravel and silt with sand and gravel. [Qvr]		- 0 2		2	l	
Firm silty sand with gravel. [Qvr]		6 8		27		
Compact silt layered with fine-grained sand and occasional gravel. [Qvr]	I D 15'	12 14 16		43		

SITE: 42 nd Avenue SW and SW Cloverdale.

GROUND ELEVATION: 375'

INVESTIGATOR: Seattle Engineering Department; W. Seattle #46, B-06964.

Lithology		Depth (feet)	Water Level	Blow Count (blows/ft)	Water Content (percent)	Atterberg Limits (percent)
Loose sandy silt; gravel and wood fragments. [Qal]		— 0 2 4		1		
Very compact sand and silt with gravel. [Qvt]		6 8		50+		
Very compact silty sand with gravel. [Qvt]	T. D. 15'	—10 12 14 16		50+		

NUMBER: 81039

SITE: 47 th Avenue SW, N. of 10208, 9' S. of centerline Valt, 3' E. of Pavement.

GROUND ELEVATION: 50'

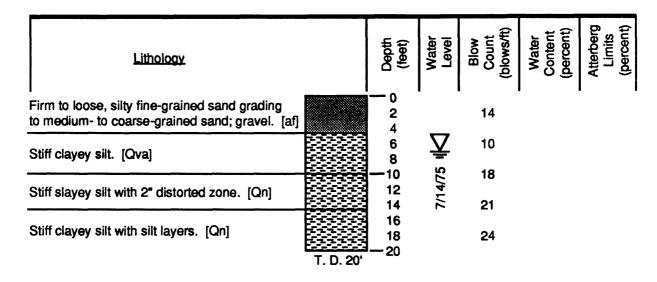
INVESTIGATOR: Seattle Engineering Department; W. Seattle #2, B-7737.

<u>Lithology</u>		Depth (feet)	Water Level	Blow Count (blows/ft)	Water Content (percent)	Atterberg Limits (percent)
Soft sandy silt with clay and gravel. [af]		- 0 2 4		4		
Medium dense clayey silt with silt partings. [Qn]		6 8		10		
Stif clayey silt with thin silt layers. [Qn]		—10 12		14		
, , ,	T. D. 15'	14 16		18		

SITE: 47 th Avenue SW, Sand Box 10214, SW Corner.

GROUND ELEVATION: 50'

INVESTIGATOR: Seattle Engineering Department; Slide #3, B-7737.



NUMBER: 81041

SITE: 10422 47 th Avenue SW. GROUND ELEVATION: 100'

INVESTIGATOR: Seattle Engineering Department; Slide #8, B-7740.

<u>Lithology</u>		Depth (feet)	Water Level	Blow Count (blows/ft)	Water Content (percent)	Atterberg Limits (percent)
Loose sand with gravel, fine-grained sand and silt. [Qva]		0 2 4	' マ	'3 1	1	
Soft to medium dense, clayey silt. [Qn]		6 8 10	8/12/75	2		
Stiff, massive clayey silt. [Qn]	T. D. 15'	12 14 16	1,8	16		

SITE: S. McClellan and Cascadia Avenue S.

GROUND ELEVATION: 150'

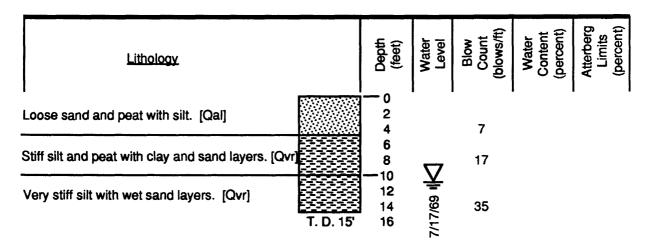
INVESTIGATOR: Seattle Engineering Department; Lake Washington #301, B-06014.

Lithology		Depth (feet)	Water Level	Blow Count (blows/ft)	Water Content (percent)	Atterberg Limits (percent)
Very stiff silt with sand and a trace of gravel. [Qvt]		— 0 2 4	•	70	•	
Very compact sand with silt and a trace of gravel. [Qvt]		6 8		50+		
Very compact sand with silt, gravel, and fractured rock. [Qvt]	T. D. 15'	—10 12 14 16		50+		

NUMBER: 81043

SITE: S. McClellan and 36 th S. GROUND ELEVATION: 100'

INVESTIGATOR: Seattle Engineering Department; Lake Washington #302, B-06014.



SITE: Mt. Saint Helens Pl. S. and S. Ridgeway Pl..

GROUND ELEVATION: 150'

INVESTIGATOR: Seattle Engineering Department; Lake Washington #303, B-06015.

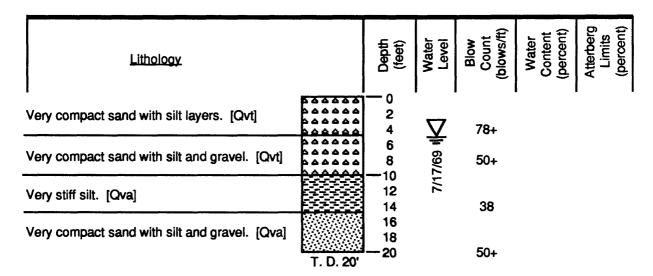
Lithology		Depth (feet)	Water Level	Blow Count (blows/ft)	Water Content (percent)	Atterberg Limits (percent)
Firm sand; trace of gravel and silt. [Qvr]		— 0 2 4	•	25	-	-
Very stiff silt with a trace of gravel and sand. [Qvt]		6 8		82		
Very compact silt with a trace of gravel. [Qvt]	T. D. 15'	—10 12 14 16		50+		

NUMBER: 81045

SITE: Cascadia Avenue S. and Sierra Dr. S.

GROUND ELEVATION: 125'

INVESTIGATOR: Seattle Engineering Department; Lake Washington #304, B-06015.



SITE: S. Jackson and Lakeside. GROUND ELEVATION: 25'

INVESTIGATOR: Seattle Engineering Department; Lake Washington #3, B-07024.

Lithology		Depth (feet)	Water Level	Blow Count (blows/ft)	Water Content (percent)	Atterberg Limits (percent)
Medium dense silt with fine-grained sand. [Qva]		0 2 4		7		'
Medium dense fine-grained sand with wood. [Qva]		6 8 —10	∇			
Loose medium-grained sand and clayey silt with sand. [Qva]		10 12 14	1777217	3		
Firm clayey silt and silty sand with a trace of gravel. [Qg]		16 18	2/2	29		
Very compact silty sand with a trace of gravel and clayey silt. [Qg]	T. D. 25'	20 22 24 26		65		

NUMBER: 81047

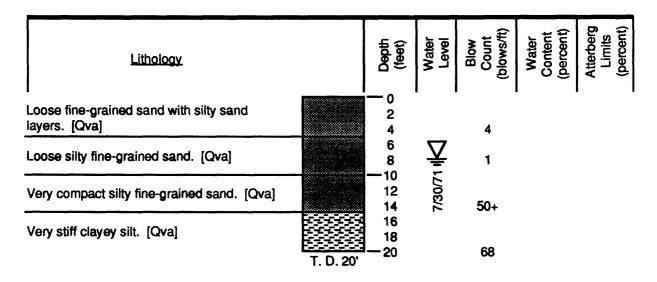
SITE: S. King and 31 st Avenue. GROUND ELEVATION: 300'

INVESTIGATOR: Seattle Engineering Department; Lake Washington #1, B-07024.

Lithology		Depth (feet)	Water Level	Blow Count (blows/ft)	Water Content (percent)	Atterberg Limits (percent)
Firm silty fine-grained sand. [Qva]	194	0 2 4		13	•	
Loose silt with fine-grained sand. [Qva]		6 8		8		
Medium dense silt. [Qva]		10 12 14		10		
Medium dense clayey silt. [Qva]		16 18				
	T. D. 20'	20		15		

SITE: S. King and Lakeside. GROUND ELEVATION: 50'

INVESTIGATOR: Seattle Engineering Department; Lake Washington #4, B-07025.



NUMBER: 81049

SITE: 32 nd Avenue S. and S. Dearborn.

GROUND ELEVATION: 175'

INVESTIGATOR: Seattle Engineering Department; Lake Washington #5, B-07025.

Lithology		Depth (feet)	Water Level	Blow Count (blows/ft)	Water Content (percent)	Atterberg Limits (percent)
Medium dense clayey silt with a trace of gravel. [Qva]		— 0 2 4	•	14	•	•
Medium dense clayey silt with a trace of gravel. [Qva]		6 8		14		
Stiff clayey silt with vertical fine-grained sand seams. [Qva]		—10 12 14		25		
Very stiff clayey silt with gravel and fine- grained sand. [Qva]	T. D. 20'	16 18 —20		41		

SITE: S. Norman and Lakeside. GROUND ELEVATION: 25'

INVESTIGATOR: Seattle Engineering Department; Lake Washington #12, B-07029.

Lithology		Depth (feet)	Water Level	Blow Count (blows/ft)	Water Content (percent)	Atterberg Limits (percent)
Very soft clayey silt with clay lumps. [Qva]		0 2 4		2		
Peat and wood. [Qn]		6 8 —10 12 14		5		
Firm medium-grained sand with gravel and silty sand with gravel. [Qg]	000000 000000	16 18 20	≯! 11/82/1	23		
Compact silty fine-grained sand and gravel. [Qg]	T. D. 25'	22 24 26	7/28	35		

NUMBER: **81052**

SITE: Atlantic and Lakeside. GROUND ELEVATION: 25'

INVESTIGATOR: Seattle Engineering Department; Lake Washington #3, B-07033.

Lithology		Depth (feet)	Water Level	Blow Count (blows/ft)	Water Content (percent)	Atterberg Limits (percent)
Loose silty sand with gravel. [Qvt]		- 0 2 4	· ¬	9		•
Firm silty sand with a trace of gravel. [Qvt]		6 8	<u> </u>	27		
Compact silty sand with gravel. [Qvt]		—10 12 14	8/17/71	40		
Compact sitly sand with gravel and sand layers. [Qvt]	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	16 18		40		
Compact silty fine-grained sand with a trace of coarse-grained sand. [Qvt]	44444 4444	20 22 24		48 37		
	T. D. 25'	26				

SITE: Lake Washington Blvd. and Doses Terrace.

GROUND ELEVATION: 25'

INVESTIGATOR: Seattle Engineering Department; Lake Washington #3, B-07033.

Lithology		Depth (feet)	Water Level	Blow Count (blows/ft)	Water Content (percent)	Atterberg Limits (percent)
Firm silty sand with gravel. [Qvt]	000000 000000 000000	-0 2 4	•	11		•
Firm silty sand and fine-grained sand. [Qvt]	000000	6 8 10	∇	27		
Very compact very fine grained sand to silt with sand layers. [Qvt]	000000	10 12 14	<u>₹</u>	80		
Very compact sand with gravel. [Qvt]	000000 00000	16 18 20	8/17/71	69		
Very compact very fine grained sand. [Qvt]	7. D. 25'	22 24 26		68		

NUMBER: 81054

SITE: S. Myrtle Street and Beacon Avenue.

GROUND ÉLEVATION: 250'

INVESTIGATOR: Seattle Engineering Department; B-7816.

Lithology		Depth (feet)	Water Level	Blow Count (blows/ft)	Water Content (percent)	Atterberg Limits (percent)
Firm silty sand with gravel. [Qvt]		— 0 2 4	⊈	20 25		
Firm clay with thin sand layers and silty sand with gravel. [Qva]		6 8	4/1/75	13		
Very compact silty fine-grained sand with sand layers. [Qva]	T. D. 15'	—10 12 14 16	·	56		

SITE: S. 98 th and 14 Avenue S. GROUND ELEVATION: 425'

INVESTIGATOR: Seattle Engineering Department; B-06233.

Lithology		Depth (feet)	Water Level	Blow Count (blows/ft)	Water Content (percent)	Atterberg Limits (percent)
Loose fine- to medium-grained sand with silt and a trace of organic material. [Qvr]		0 2 4	3/e9/E	7		
Firm very fine grained sand with silt. [Qvr]		6 8	10/28/69	25		
Very compact, clean fine- to medium-grained sand. [Qvr]		—10 12 14		80		
Very stiff silty clay with silt and very fine grained sand layers. [Qvr]		16 18		41		
Stiff silty clay with sand, gravel and silty clay layers. [Qvt]	T. D. 25'	20 22 24 26		20		

NUMBER: 81056

SITE: S. 98 th and 12 th Avenue S. GROUND ELEVATION: 425'

INVESTIGATOR: Seattle Engineering Department; B-06233.

Lithology.		Depth (feet)	Water Level	Blow Count (blows/ft)	Water Content (percent)	Atterberg Limits (percent)
Very compact medium-grained sand with fractured rock, gravel and silt. [Qvr]		— 0 2 4	Ā	77		
Very compact medium- to fine- grained sand and gravel with sand. [Qvr]	.0.0.0.0.0. .0.0.0.0.0.	6 8	10/29/69	50+		
Very compact fine-grained sand to gravel, 1" layer if very fine-grained sand and silt. [Qvr]	.0.0.0.0.0.0. .0.0.0.0.0.0.	—10 12 14	¥	53		
Compact gravel with sand and fine- to medium-grained sand. [Qvr]		16 18		47		
Very compact coarse- to fine-grained sand. [Qvr		22 24		70+		
Very compact coarse- to fine-grained sand. [Qvr	T. D. 25'	1		47 70+		

SITE: 7 th Avenue S. and S. 98 th. GROUND ELEVATION: 425'

INVESTIGATOR: Seattle Engineering Department; B-06235.

Lithology		Depth (feet)	Water Level	Blow Count (blows/ft)	Water Content (percent)	Atterberg Limits (percent)
Medium dense silt with sand and clay. [Qvr]		0 2 4	•	6		
Loose sand with silt lumps. [Qvr]		6 8		8		
Compact sand. [Qvr]		—10 12 14		31		
No recovery		16 18				
Firm sand with silt and silt lumps. [Qvr]	T. D. 25'	20 22 24 26		26		

NUMBER: 81058

SITE: 5 th Avenue S. and S. 98 th. GROUND ELEVATION: 400'

INVESTIGATOR: Seattle Engineering Department; B-06235.

<u>Lithology</u>		Depth (feet)	Water Level	Blow Count (blows/ft)	Water Content (percent)	Atterberg Limits (percent)
Firm sand with silt, gravel, and a trace of organic material. [Qvr]		— 0 2 4	•	13		
Firm fine- to medium-grained sand with a trace of gravel and silt. [Qvr]		6 8		11		
Firm coarse- to fine-grained silty sand. [Qvr]	T. D. 15'	10 12 14 16		16		

SITE: Director and W. Marginal Way.

GROUND ELEVATION: 37

INVESTIGATOR: Seattle Engineering Department; B-7806.

Lithology		Depth (feet)	Water Level	Blow Count (blows/ft)	Water Content (percent)	Atterberg Limits (percent)
Loose silt to very fine grained sand. [Qvr]		— 0 2 4	•	6		
Loose silt to very fine grained sand with layered sands and silts. [Qvr]		6 8 10		9		
Firm fine-grained sand; some medium- grained sand. [Qvr]		12 14		17		
Firm fine- to mediumgrained sand; some gravel. [Qvr]		16 18 20	<u>က</u> <u>ဆ</u>	12		
Very compact silty sand and gravel. [Qvt]	T. D. 25'	20 22 24 26	8/31/73	100+		

NUMBER: 81060

SITE: 10 th Avenue S. and S. Trenton.

GROUND ELEVATION: 50'

INVESTIGATOR: Seattle Engineering Department; B-7806.

Lithology		Depth (feet)	Vater -evel	Blow Count (blows/ft)	Vater ontent ercent)	tterberg Limits percent)
1			> -	9	~ Q B	ફ ે છ
Loose fine-grained sand with some silt and a		一 0 2				
trace of organic material. [Qvr]		4		8		
Loose, layered fine- to medium-grained		6				
sand. [Qvr]		8		8		
Silt with hard lumps, 2" of siltstone in		—10 12				
tip. [Bedrock]		14		100+		
• •	T. D. 15'	16				

SITE: E. Republican and 30 th Avenue E..

GROUND ELEVATION: 112'(?)

INVESTIGATOR: Seattle Engineering Department; B-07342.

Lithology		Depth (feet)	Water Level	Blow Count (blows/ft)	Water Content (percent)	Atterberg Limits (percent)
Moist, medium dense clay and silt. [Qva]		— 0 2 4	•	10		
Moist, firm silty sand with clay and silt layers. [Qva]		6 8 —10		11		
Moist, firm silt with a trace of gravel and sand seams. [Qn]		—10 12 14	∇	26		
Moist, very compact, sandy silt with gravel. [Qg]	000000 000000	16 18 —20	372 *	100+		
Moist, very compact, sandy silt with gravel. [Qg]	T. D. 25'	22 24 26	12/18/72	100+		

NUMBER: 82002

SITE: E. Mercer and 30 th Avenue E. GROUND ELEVATION: 100'(?)

INVESTIGATOR: Seattle Engineering Department; B-07342.

Lithology		Depth (feet)	Water Level	Blow Count (blows/ft)	Water Content (percent)	Atterberg Limits (percent)
Moist, very stiff sandy silt with gravel. [Qva]		— 0 2 4	<u> </u>	28		'
Moist, very stiff silt; fractured rock and silty clay. [Qva]		6 8 —10	12/28/72	65		
Moist, very stiff silt; thin sand layers. [Qva]		—10 12 14	#	34		
Moist, very stiff silt. [Qva]		16 18 20		32		
Moist, very stiff silt with clay. [Qn]		22 24		29		
Moist, very stiff silt with clay. [Qn]	T. D. 30'	26 28 30		26		

SITE: E. Madison and E. John. GROUND ELEVATION: 275'

INVESTIGATOR: Seattle Engineering Department; B-07334.

Lithology		Depth (feet)	Water Level	Blow Count (blows/ft)	Water Content (percent)	Atterberg Limits (percent)
Moist, loose, silty sand with a trace of wood ash. [af]		0 2 4	•	9		
Moist, firm, silty sand with a trace of clay. [Qva]		6 8		18		
Moist, very stiff, silt with fine-grained sand layers. [Qva]		—10 12 14		28		
Moist, medium dense clay. [Qva]		16 18	∇	15		
Moist, very stiff silt. [Qva]		20 22 24	1/1/1/6	15 33		
Moist, very stiff silt. [Qva]	T. D. 30'	26 28 —30	6	35		

NUMBER: 82004

SITE: Empire Way and E. Cherry (85' S. of centerline Cherry).

GROUND ELEVATION: 275'

INVESTIGATOR: Seattle Engineering Department; B-07017.

Lithology		Depth (feet)	Water Level	Blow Count (blows/ft)	Water Content (percent)	Atterberg Limits (percent)
Wet, very soft, sandy silt with a trace of organic material and gravel. [af]		- 0 2 4	•	push		
Moist, very compact, sandy silt with gravel and silt seams. [Qvt]	44444	6 8		47		
Moist, very compact, silty sand with gravel and clean sand seams. [Qvt]		—10 12 14		78		
Moist, very compact, silt and sand pockets with gravel. [Qvt]		16 18		5 0.		
Moist, compact, silt and sand with gravel. [Qva]	20 22 24		50+ 38		
	T. D. 25'	26				

SITE: Empire Way and E. Marion (58' W. of centerline Empire).

GROUND ELEVATION: 250'

INVESTIGATOR: Seattle Engineering Department; B-07017.

Lithology		Depth (feet)	Water Level	Blow Count (blows/ft)	Water Content (percent)	Atterberg Limits (percent)
Wet, very soft, silt and sand with gravel and wood. [af]		- 0 2 4	_	2		
Moist, very compact, silty sand with gravel and fractured rock. [Qvt]		6 8 10	ž	93		
Moist, very compact, silty sand with gravel and fractured rock. [Qvt]	T. D. 15'	10 12 14 16	6/8/71	84+		

NUMBER: 82006

SITE: E. Alder and 24 th Avenue. GROUND ELEVATION: 300'

INVESTIGATOR: Seattle Engineering Department; B-07114.

Lithology		Depth (feet)	Water Level	Blow Count (blows/ft)	Water Content (percent)	Atterberg Limits (percent)
Moist, firm, silty fine-grained sand with gravel. [Qvr]		一 0 2 4	•	25		
Moist, very compact, silty fine-grained sand with gravel. [Qvt]	00000	6 8	∇	100+		
Moist, very compact, silty fine-grained sand with gravel. [Qvt]	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	—10 12 14	¥21 <u>₹</u>	100+		
Moist, very compact, silty fine-grained sand with gravel. [Qvt]		16 18	3/16/21	100.		
Moist, very compact, silty fine-grained sand with gravel. [Qvt]	000000	20 22 24		100+ 100+		
	T. D. 25'	26		.501		

SITE: E. Alder and 27 th Avenue. **GROUND ELEVATION: 300'**

INVESTIGATOR: Seattle Engineering Department; B-07114.

Lithology		Depth (feet)	Water Level	Blow Count (blows/ft)	Water Content (percent)	Atterberg Limits (percent)
Moist, firm, silty fine-grained sand with gravel. [Qvt]		0 2 4	∇	25		
Moist, very compact, silty fine-grained sand with gravel and silt layers. [Qvt]		6 8 10	1/14/71 🖷	66		
Moist, firm, silty fine-grained sand and clayey silt. [Qva]		12 14	7	21		
Moist, firm, silty fine-grained sand with a trace of gravel. [Qva]		16 18 — 20		24		
Moist, compact, silty fine-grained sand. [Qva]	T. D. 25'	22 24 26		36		

NUMBER: 82008

SITE: Empire Way and E. Olive (164' E. of centerline Empire). GROUND ELEVATION: 150'

INVESTIGATOR: Seattle Engineering Department; B-07020.

Lithology		Depth (feet)	Water Level	Blow Count (blows/ft)	Water Content (percent)	Atterberg Limits (percent)
Moist, loose, sand with silt. [Qva]		- 0 2 4		4		
Moist, medium dense, silt and clayey silt with a trace of organic material. [Qn]		6 8		13		
Moist, medium dense, silt and clay with a trace of organic material. [Qn]		—10 12 14		13		
Moist, stiff, silt with clay lumps and coarse silt seams. [Qn]		16 18		20		
Moist, stiff, silt and clay with silt seams. [Qn]		20 22 24		20 16		
	T. D. 25'	26				

SITE: Empire Way and E. Howell (143' E. of centerline Empire).

GROUND ELEVATION: 125'

INVESTIGATOR: Seattle Engineering Department; B-07020.

Lithology		Depth (feet)	Water Level	Blow Count (blows/ft)	Water Content (percent)	Atterberg Limits (percent)
Moist, very soft, silt and sand. [af]		- 0 2 4	•	2		
Moist, soft, silt, clayey silt, and sand with sand seams and wood fibers. [af]		6 8		3		
Moist, stiff, clayey silt with sand and gravel. [Qn]		—10 12 14		17		
Moist, medium dense, clayey silt with sand seams and organic material. [Qn]		16 18		8		
Moist, medium dense, silty clay with sand seams and organic material. [Qn]		20 22 24		10		
Moist, medium dense, silt with sand seams. [Qn	T. D. 30'	26 28 —30		13		

NUMBER: 82010

SITE: Empire Way and E. Denny. GROUND ELEVATION: 125'

INVESTIGATOR: Seattle Engineering Department; B-07021.

Lithology		Depth (feet)	Water Level	Blow Count (blows/ft)	Water Content (percent)	Atterberg Limits (percent)
Moist to wet, soft, silt with sand and occasional gravel. [Qva]		0 2 4	•	4	'	•
Moist, soft, very fine grained sand and silt with sand seams. [Qva]		6 8		5		
Alternating layers of moist, medium dense, silt and sand. [Qva]		—10 12 14	∇	11		
Moist, medium dense, sand and silt with sand seams. [Qva]		16 18	6/4/71	12		
Moist, very compact, silty sand with gravel. [Qq		20 22 24	-	13 83		
	T. D. 25'	26		_		

SITE: 31 st Avenue and E. Howell. GROUND ELEVATION: 175'

INVESTIGATOR: Seattle Engineering Department; B-07021.

Lithology		Depth (feet)	Water Level	Blow Count (blows/ft)	Water Content (percent)	Atterberg Limits (percent)
Moist, very soft, silt with dclay lumps and occasional gravel and organic material. [Qva]		— 0 2 4	•	2		•
Moist, soft, clayey silt with sand, organic material and wood. [Qn]		6 8 —10	∇	4		
Wet, soft, clayey silt with sand, organic material and wood. [Qn]		—10 12 14	5/4/71	4		
Moist to wet, medium dense, clayey silt with sand, sand seams, and organic material. [Qn]		16 18	0	7		
Wet, firm, silty sand. [Qn]		20 22 24		, 16		
Moist, medium dense, silt with clay lumps and sand seams. [Qn]	T. D. 30'	26 28 —30		12		

SITE: Hillside Drive and E. Harrison Street.

GROUND ELEVATION: 150'

INVESTIGATOR: Seattle Engineering Department; B-07284.

Lithology		Depth (feet)	Water Level	Blow Count (blows/ft)	Water Content (percent)	Atterberg Limits (percent)
Moderately firm, silt with zones of fine sandy silt. [Qva]		— 0 2 4 6 8 —10		56		
Dense, silty fine-grained sand with zones of sandt silt. [Qva]		12 14 16 18			40.2	
Very firm, clayey silt with distorted lenses of silt and fine sandy silt. [Qn]		20 22 24 26 28		101	19.3	
or our arrows and party		30 32 34 36 38	1/15/72 1	88		
		40 42 44 46 48	~	69	27.6	
		- 50 52 54 56 58		79	28.2	
Layers of silty fine-grained sand. [Qn]		60 62 64 66		90	27.2	
		68 70 72 74 76		105		
		78 80 82		129	30.2	
Van firm along the side loop of the		84 86 88		105		
Very firm, clayey silt with layers of silty clay, silt and fine sandy silt. [Qn]	T. D. 125'	90 92 94 96 98 		168		26-41

SITE: 35 th Avenue and E. Marion Street.

GROUND ELEVATION: 325'

INVESTIGATOR: Seattle Engineering Department; B-07009, hole #24.

Lithology		Depth (feet)	Water Level	Blow Count (blows/ft)	Water Content (percent)	Atterberg Limits (percent)
Moist, loose, clean fine-grained sand with occasional gravel. [Qva]		— 0 2 4	•	8		•
Moist, firm, clean fine-grained sand with occasional gravel. [Qva]		6 8 —10		15		
Wet, firm, clean fine-grained sand and silt with sand seams. [Qva]		10 12 14		30		
Wet, compact, very fine grained sand and silt with layers of very fine grained sand. [Qva]		16 18		20		
Moist, stiff, silt to clayey silt with sand seams. [Qva]		20 22 24		39 18		
Moist, very stiff to compact, clean fine-grained sand and silt. [Qva]	T. D. 30'	26 28 —30		34		

NUMBER: 82014

SITE: 35 th Avenue and E. Columbia Street.

GROUND ELEVATION: 325'

INVESTIGATOR: Seattle Engineering Department; B-07009, hole #25.

Lithology		Depth (feet)	Water Level	Blow Count (blows/ft)	Water Content (percent)	Atterberg Limits (percent)
Moist, firm, clean fine-grained sand. [Qva]		- 0 2 4	•	15	'	'
Wet, compact, slightly silty, fine-grained sand. [Qva]		6 8 —10	<u> </u>	31		
Wet, very compact, silty very fine grained sand. [Qva]		—10 12 14	5/12/71	52		
Wet, firm, slightly silty, fine-grained sand with silt seams. [Qva]		16 18		24		
Moist, stiff, silt with sand seams and clayey silt with a trace of organic material. [Qva]	T. D. 25'	20 22 24 26		35		

SITE: 38 th Avenue and E. Denny Way.

GROUND ELEVATION: 220'

INVESTIGATOR: Seattle Engineering Department; B-06998, hole #3.

Lithology		Depth (feet)	Water Level	Blow Count (blows/ft)	Water Content (percent)	Atterberg Limits (percent)
Wet, very soft, sandy silt with a trace of organic material. [Qva]		— 0 2 4	∇	1		
Moist, medium dense, sandy, clayey silt with clay lumps. [Qn]		6 8 10	ž Ž	9		
Moist, stiff, clayey silt with very fine grained sand seams and silty sand layer. [Qn]		12 14	5/10/71	17		
Saturated, compact, clean very fine grained sand. [Qn]		16 18 20		39		
Wet, compact, clean very fine grained sand and silt. [Qn]	T. D. 25'	20 22 24 26		31		

NUMBER: 82016

SITE: Madrona Drive and E. Olive Street.

GROUND ELEVATION: 165'

INVESTIGATOR: Seattle Engineering Department; B-06998, hole #4.

Lithology		Depth (feet)	Water Level	Blow Count (blows/ft)	Water Content (percent)	Atterberg Limits (percent)
Moist, medium dense, clayey silt with sand and occasional gravel. [Qn]		— 0 2 4	•	9		'
Moist, stiff clayey silt with a trace of organic material and sand seams. [Qn]		6 8 —10	$\bar{\Sigma}$	21		
Moist, stiff clayey silt. [Qn]		12 14	5/10/71	18		
Moist, stiff clay and silt. [Qn]		16 18		16		
Moist, stiff, clayey silt. [Qn]		20 22		16		
	T. D. 25'	24 26		24		

SITE: 30' W. of centerline Empire Way S. and 70' S. of centerline S. Kenyon Street. GROUND ELEVATION: 125'

INVESTIGATOR: Seattle Engineering Department; hole # 223.

Lithology		Depth (feet)	Water Level	Blow Count (blows/ft)	Water Content (percent)	Atterberg Limits (percent)
Moist, very stiff; slightly clayey sandy silt. [Qvr]		0 2 4		38		
Moist, compact; coarse-grained sand with trace of gravel, some clay and very fine-grained sand layers. [Qvt]		6 8 10 12 14		51 35		
Moist, compact; silty fine-grained sand. [Qva]		16 18		39		
Moist to wet, very compact; sand. [Qva]	T.D. 35'	- 20 22 24 26 28 - 30 32 34	3-31-69 1	62 62 59		

SITE: 20' N. of centerline S. Kenyon Street and 60' E. of centerline Rainier Avenue S..

GROUND ELEVATION: 50'

INVESTIGATOR: Seattle Engineering Department; Lake Washington SE. #227.

Lithology		Depth (feet)	Water Level	Blow Count (blows/ft)	Water Content (percent)	Atterberg Limits (percent)
No recovery.		0 2 4	•	5		
Moist, medium dense silt; some sand. [Qal]		6 8 10	Ā	6		
No recovery.		12 14	3/31/69	13		
Moist, medium dense clay; trace of gravel and silt. [Qal]		16 18	િ			
Wet, soft clay; trace of gravel. [Qal]		20 22 24		7 5		
Moist, very soft clay; sand layers. [Qal]		26 28				
Moist, firm silt; sand and gravel. [Qvr]		30 32 34		2 11		
Wet to moist, compact sand; silt and gravel. [Qvr]		36 38	•			
8 []	T. D. 40'			36		

SITE: 17' S. of centerlin S. Kenyon Street and 48' E. of centerline 46 th Avenue S..

GROUND ELEVATION: 75'

INVESTIGATOR: Seattle Engineering Department; Lake Washington SE. #228.

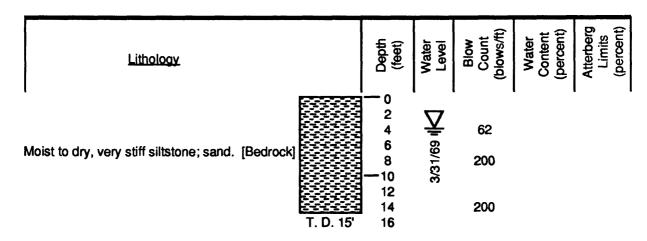
Lithology		Depth (feet)	Water Level	Blow Count (blows/ft)	Water Content (percent)	Atterberg Limits (percent)
Moist, medium dense silt; sand and a trace of gravel. [Qvr]		0 2 4	•	15		
No recovery.		6 8	$\bar{\Delta}$	50		
Moist, very stiff silt; sand and gravel. [Qvt]	000000 000000	10 12 14	3/31/69	57		
Moist, very stiff silt; sand and a trace of gravel. [Qvt]		16 18	e)	144		
Very compact sand; silt and gravel. [Bedrock]	T. D. 25'	20 22 24 26		200		

NUMBER: 82020

SITE: 16' E. of centerlin 48 th Avenue S. and 65' S. of centerline Othello Street.

GROUND ELEVATION: 100'

INVESTIGATOR: Seattle Engineering Department; Lake Washington SE. #229.



SITE: 53 rd and Bangor GROUND ELEVATION: 250'

INVESTIGATOR: Seattle Engineering Department; Bangor-Renton Trans Line #200.

Lithology		Depth (feet)	Water Level	Blow Count (blows/ft)	Water Content (percent)	Atterberg Limits (percent)
Moist, loose silty sand with sand and silt layers. [Qvr]		- 0 2 4	•	10		,
Wet to moist, firm, clean silty sand with sand and silt layers. [Qvr]		6 8		21		
Moist, very compact, clean medium-grained sand and silt with sand layers. [Qvr]		—10 12 14		87+		
Moist, very compact, clean medium-grained sand with vertical silt seams. [Qvr]		16 18		77+		
Moist, very compact, clean medium- to coarse- grained sand. [Qvr]		20 22 24		50+		
Moist, very compact, clean medium-grained sand with silt layers at bottom. [Qvr]	T. D. 30'	26 28 —30		77		

NUMBER: **82022**

SITE: 12' L and 5' S. of Pole #201. GROUND ELEVATION: 300

INVESTIGATOR: Seattle Engineering Department; Bangor-renton Trans Line #201.

Lithology		Depth (feet)	Water Level	Blow Count (blows/ft)	Water Content (percent)	Atterberg Limits (percent)
Moist, loose silty sand with gravel. [Qvr]		- 0 2 4	•	6		
Moist, firm silty sand with gravel. [Qvr]		6 8		12		
Very moist, compact sand with silt and silty sand layers. [Qvr]		—10 12 14		40		
Moist, very compact sand. [Qvr]		16 18				
Moist, compact sand. [Qvr]		20 22 24		62 35		
Very moist, compact sand. [Qvr]		26 28				
	T. D. 30'	30		50		

SITE: Ploe #202 Trans Line and 56 th Avenue S..

GROUND ELEVATION: 275'

INVESTIGATOR: Seattle Engineering Department; Bangor-Renton Trans Line #202.

Lithology		Depth (feet)	Water Level	Blow Count (blows/ft)	Water Content (percent)	Atterberg Limits (percent)
Wet, loose, clayey silty sand with gravel. [Qvr]		- 0 2 4	, <u>Ā</u>	7		•
Wet, loose silty sand with gravel; clay and silt layers. [Qvr]		6 8 10	5/21/70	10		
Saturated, compact clean sand; layers of silty sand. [Qvr]		12 14		39		
Wet compact silty sand with gravel. [Qvt]		16 18 —20		49		
Moist, very compact silty sand with coarse- grained sand and gravel. [Qvt]	00000	22 24		50+		
Saturated, very compact, silty coarse- grained sand with gravel. [Qvt]	T. D. 30'	26 28 — 30		93+		

NUMBER: 82026

SITE: Pole #204, Trans Line and 60 th Avenue S..

GROUND ELEVATION: 275'

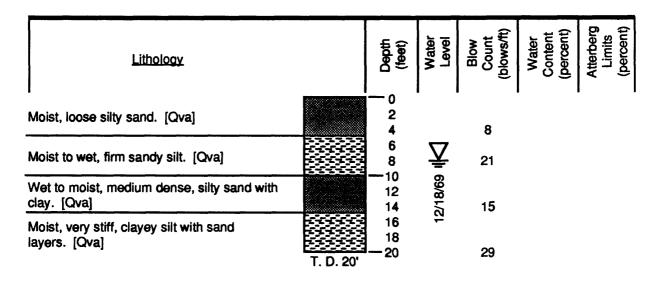
INVESTIGATOR: Seattle Engineering Department; Bangor-Renton Trans Line #204.

<u>Lithology</u>		Depth (feet)	Water Level	Blow Count (blows/ft)	Water Content (percent)	Atterberg Limits (percent)
Moist, losse, very fine sandy silt; some wood fibers. [Qvr]		-0 2 4	- <u>₹</u>	9		
Moist to wet, loose, silty sand with clayey silt layers. [Qvr]		6 8	5/21/70	7		
Saturated, loose, clayey sandy silt with layers of clean medium-grained sand. [Qvr]		—10 12 14		7		
Saturated, compact, clean medium-grained sand with 3" silt layer. [Qvr]		16 18		0.4		
Saturated, firm sandy silt to silty sand. [Qvr]		20 22 24		34 25		
Saturated, very compact medium-grained sand with some silt and gravel layers. [Qvr]	T. D. 30'	26 28 —30		50+		

SITE: 38 th Avenue and Norwood; 70' N. of centerlin and 15' W. of centerline.

GROUND ELEVATION: 125'

INVESTIGATOR: Seattle Engineering Department; Lake Washington-E. Jefferson #3.

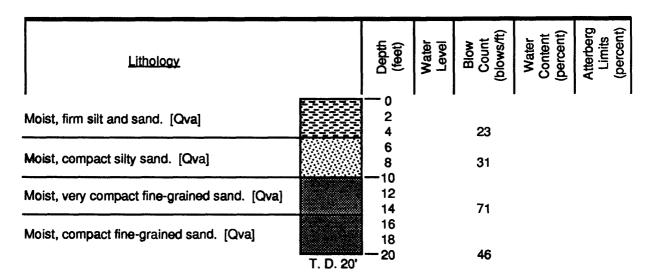


NUMBER: 82028

SITE: 37 th Avenue and S. Columbia; 14' W. of centerline and 5' S. of centerline.

GROUND ELEVATION: 225'

INVESTIGATOR: Seasttle Engineering Department; Lake Washington-E. Jefferson, #4.



SITE: 17' E. of centerlin E. Spruce and Street end of E. Spruce. (ext. of 33 rd Ave E.)

GROUND ELEVATION: 225'

INVESTIGATOR: Seattle Engineering Department; Lake Washington-E Jefferson, #9.

Lithology		Depth (feet)	Water Level	Blow Count (blows/ft)	Water Content (percent)	Atterberg Limits (percent)
Moist, compact, fine- to medium-grained sand with gravel and silt layers. [Qva]		— 0 2 4		35		
Moist, very compact gravel with a trace of sand and silt. [Qg]		6 8 10		50+		
Moist, compact, fine- to coarse-grained sand. [Qg]		12 14		41		
Moist, compact, very fine to fine grained sand and silt; layers of medium-grained sand. [Qg]		16 18 20		43		
Moist, compact very fine to fine grained sand with a trace of silt. [Qg]	T. D. 25'	22 24 26		36		

NUMBER: 82030

SITE: 32 nd Avenue and E. Terrace; 18' E. of centerline and 30' S. of centerline.

GROUND ELEVATION: 275'

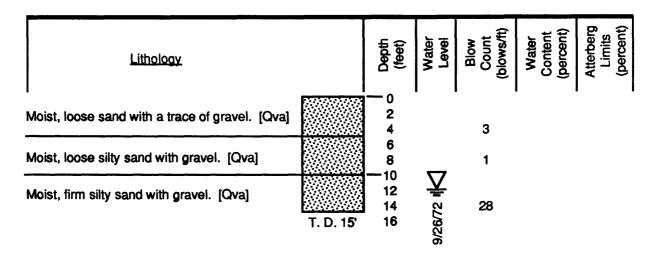
INVESTIGATOR: Seattle Engineering Department; Lake Washington-E. Jefferson, #10.

Lithology		Depth (feet)	Water Level	Blow Count (blows/ft)	Water Content (percent)	Atterberg Limits (percent)
Wet, loose sand with silt. [Qva]		0 2 4	•	9		
Moist, stiff sand and silt in layers. [Qva]		6 8		19		
Moist, very stiff silt with clay. [Qva]		—10 12 14		38		
Moist, compact sand; layers of silt, clay, and sand. [Qva]	T. D. 20'	16 18 —20		3 6		

SITE: 1 st Avenue S. and SW Thistle (W. side)

GROUND ELEVATION: 25'

INVESTIGATOR: Seattle Engineering Department; SW Kenyon, #6.

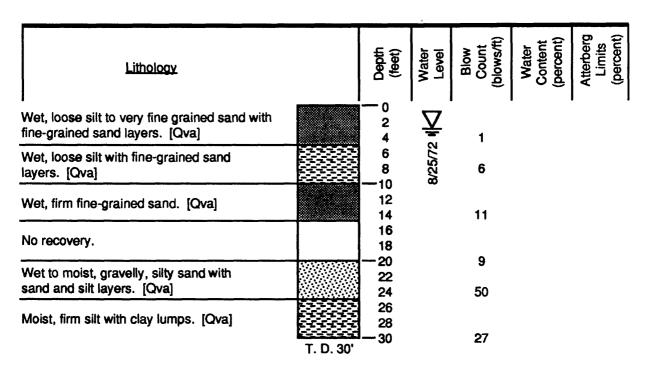


NUMBER: 82032

SITE: SW Kenyon and Detroit Avenue SW.; 12' N. of centerline and 35' E. of centerline.

GROUND ELEVATION: 25'

INVESTIGATOR: Seattle Engineering Department; SW Kenyon Sewer, #8.



SITE: 10 th Avenue SW. and SW. Cloverdale; 6' N. and 20' W. of centerline.

GROUND ELEVATION: 425'

INVESTIGATOR: Seattle Engineering Department; Highland Park Sewer, #5.

Lithology		Depth (feet)	Water Level	Blow Count (blows/ft)	Water Content (percent)	Atterberg Limits (percent)
Moist, very compact silty sand with gravel. [Qvt]		— 0 2 4		50+		
Moist, very compact silty sand with gravel. [Qvt]		6 8 10	À• 177211	50+		
Wet to moist, very compact fine-grained sand with 2" silt layer. [Qva]		12 14	1/27/1	50		
Saturated, very compact fine-grained sand with silt. [Qva]		16 18		62		
Wet, very compact, very fine grained sand with silt. [Qva]	T. D. 25'	20 22 24 26		63 50+		

NUMBER: 82034

SITE: 9 th Avenue SW. and SW. Barton; 45' S. and 20' E. of centerline.

GROUND ELEVATION: 425'

INVESTIGATOR: Seattle Engineering Department; Highland Park Sewer, #6.

Lithology		Depth (feet)	Water Level	Blow Count (blows/ft)	Water Content (percent)	Atterberg Limits (percent)
Wet, compact fine-grained sand with a trace of gravel. [Qvr]		— 0 2 4		39		
Wet, firm fine-grained sand with a trace of gravel. [Qvr]		6 8		29		
Wet to moist, very compact, gravelly fine- grained sand. [Qvt]		—10 12 14		50+		
Moist, very compact, gravelly fine-grained sand. [Qvt]	000000	16 18		5 0.		
No recovery.		20 22		50+		
•	T. D. 25 '	24 26		50+		

SITE: Delridge Way SW. and Cambridge; NE Corner.

GROUND ELEVATION: 400'

INVESTIGATOR: Seattle Engineering Department; Del. Duw. Trans Line, #24A.

Lithology		Depth (feet)	Water Level	Blow Count (blows/ft)	Water Content (percent)	Atterberg Limits (percent)
Moist, compact gravelly sand. [Ovt]	\$ \$ \$ \$ \$ \$ \$ \$ \$	— 0 2 4		39		
Moist, compact gravelly sand. [Qvt]	00000	6 8 —10		49		
Moist, compact gravelly sand. [Qvt]	44444	12 14		31		
Moist, very compact sand with a trace of gravel. [Qva]		16 18		60		
Moist, compact fine-grained sand. [Qva]		20 22 24		60 31		
Moist, very compact fine-grained sand. [Qva]	T. D. 30'	26 28 —30		53		

NUMBER: **82036**

SITE: Delridge Way SW and 21st Svenue SW, 270' N. of Henderson.

GROUND ELEVATION: 375'

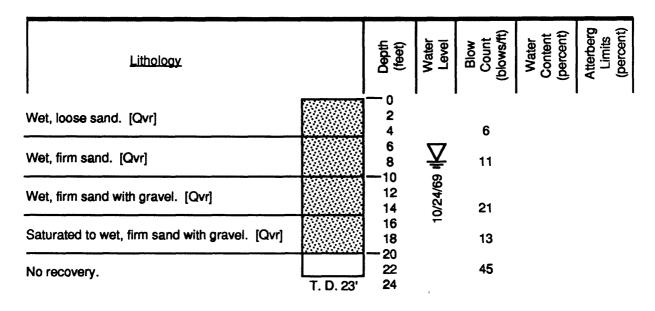
INVESTIGATOR: Seattle Engineering Department; hole # 28A.

Lithology		Depth (feet)	Water Level	Blow Count (blows/ft)	Water Content (percent)	Atterberg Limits (percent)
Moist, very compact; silt sand with gravel. [Qvt]	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 2 4	•	50+	•	
Moist, very stiff; silt. [Qva]		6 8 —10		31		
Moist, firm; sand with silt layers. [Qva]		12 14		24		
Moist, very compact; sand with gravel		16 18 —20		67		
layers. [Qva]		22 24 26		68		
	T.D. 30'	28 —30		68		

SITE: 8' N. of Plan Location, 1 st SW and 98 th(?).

GROUND ELEVATION: 275'

INVESTIGATOR: Seattle Engineering Department; Del. - Duw. Trans Line, #13.



NUMBER: **82038**

SITE: 4 th Avenue SW and SW 98 th Street; 34' S. and 36' E. of centerline.

GROUND ELEVATION: 387'

INVESTIGATOR: Seattle Engineering Department; Del. - Duw. Trans Line, #14S.

Lithology		Depth (feet)	Water Level	Blow Count (blows/ft)	Water Content (percent)	Atterberg Limits (percent)
Moist, loose, silty, gravelly sand. [Qvr]		0 2 4	[5	,	
Wet, loose, silty sand with gravel. [Qvr]		6 8	abla	10		
Wet, very compact, gravelly sand. [Qvt]	24444	—10 12 14	<mark>≯ </mark> 1 07/61/2	78		
Moist, very compact, silty sand with gravel. [Qva]		16 18	2/19/	EC		
Moist, very compact, fine-grained sand with silt layers. [Qva]		20 22 24		56 86		
Wet to moist, very compact, fine-grained sand wuth silt layers and organic material. [Qn]	T. D. 30'	26 28 — 30		50+		

SITE: 30' W. of centerline rainier Avenue S. and 70' S. of centerline S. Frontenac.

GROUND ELEVATION: 100'

INVESTIGATOR: Seattle Engineering Department; Lake Washington SE. 8W, #9-8W.

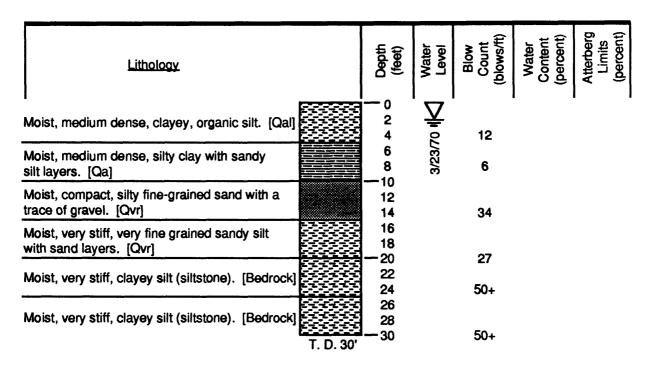
Lithology		Depth (feet)	Water Level	Blow Count (blows/ft)	Water Content (percent)	Atterberg Limits (percent)
Moist, loose, sand with gravel and silt. [Qal]		0 2 4	•	7		•
No recovery.		6 8		3		
Gravel and wood. [Qal]	0.0.0.0.0.0.0	—10 12 14	Ā	12+		
Moist, medium dense, silt with wood and a trace of sand. [Qal]		16 18	 			
Moist, stiff, silt with a trace of sand. [Bedrock]		20 22 24	1	15 21		
Moist, very stiff silt. [Bedrock]		26 28				
	T. D. 30'	 30		28		

NUMBER: 82040

SITE: 20' E. of centerline 37 th S. and 75' N. of centerline S. Myrtle.

GROUND ELEVATION: 125'

INVESTIGATOR: Seattle Engineering Department; Lake Washington SE. #4.



SITE: 25' E. of centerline 37 th S. and S. Wilson Street.

GROUND ELEVATION: 125'

INVESTIGATOR: Seattle Engineering Department; Lake Washington SE. #4.

Lithology		Depth (feet)	Water Level	Blow Count (blows/ft)	Water Content (percent)	Atterberg Limits (percent)
Moist, medium dense, silty clay with organic material. [Qal]		- 0 2 4	·	6		•
Saturated, loose, silty sand. [Qvr]		6 8	3/23/70	5		
Wet, soft, sandy, silty clay. [Qvr]		—10 12 14	3/2	2		
Wet, soft, clay with a trace of gravel and sand layers. [Qvr]		16 18		0		
Moist, very stiff silt and clay (siltstone). [Bedrock		20 22 24		2 50+		
Moist, very stiff, silt and clay (siltstone) [Bedrock		26 28		5 0.		
	T. D. 30'	30		50+		

NUMBER: 82044

SITE: 150' E. of 16 th Avenue S. and 185' S. of S. Bradford; Station 11+50.

GROUND ELEVATION: 325'

INVESTIGATOR: Seattle Engineering Department; Beacon Resevoir, #3.

Lithology		Depth (feet)	Water Level	Blow Count (blows/ft)	Water Content (percent)	Atterberg Limits (percent)
Moist, loose, silty fine-grained sand with a trace of organic material. [af]		— 0 2 4] i	4		
Moist, to wet, very compact, silty sand with gravel. [Qvr]		6 8		63		
Moist to wet, very compact, silty sand with gravel. [Qvt]	44444	—10 12 14		77		
Moist, very compact, sand with silt and gravel. [Qvt]		16 18		100+		
Moist, very compact, sand with silt and gravel. [Qvt]		20 22 24		100+		
	T. D. 25'	26				

SITE: 15' W. of centerline 24 th Avenue S. and 15' S. of centerline S. Hudson Street.

GROUND ELEVATION: 325'

INVESTIGATOR: Seattle Engineering Department; Lake Washington S. Area 5, #505.

Lithology		Depth (feet)	Water Level	Blow Count (blows/ft)	Water Content (percent)	Atterberg Limits (percent)
Moist, very stiff, silt with a trace of sand. [Qvr]		0 2 4	•	57		
Moist, very compact, sand (sandstone). [Bedrock]		6 8 10		73		
Dry very compact, sand (sanstone). [Bedrock]	T. D. 15'	12 14 16		50+		

NUMBER: 82046

SITE: 25' S. of centerline S. Dawson and 3' E. of centerline 27 th Avenue S..

GROUND ELEVATION: 325'

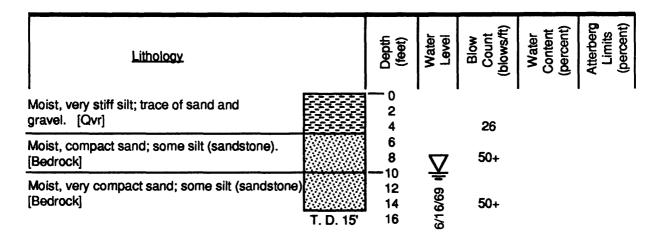
INVESTIGATOR: Seattle Engineering Department; Lake Washington S. Area 5, #506.

<u>Lithology</u>		Depth (feet)	Water Level	Blow Count (blows/ft)	Water Content (percent)	Atterberg Limits (percent)
Moist, firm sand with silt and gravel. [Qvr]		— 0 2 4	-	30		
Moist, very stiff silt; some sand. [Qvr]		6 8		35		
Moist, very stiff silt with sand layers. [Qvr]	T. D. 15'	—10 12 14 16		42		

SITE: 15' E. of centerline Bowen Pl. S. and 50' N. of centerline Dawson Street.

GROUND ELEVATION: 200'

INVESTIGATOR: Seattle Engineering Department; Lake Washington SE. 8W, #1-8W.



NUMBER: 82048

SITE: 35' E. of centerline 47 th Avenue S. and 20' S. of centerline S. Dawson Street.

GROUND ELEVATION: 200'

INVESTIGATOR: Seattle Engineering Department; Lake Washington SE. 8W, #2-8W.

Lithology		Depth (feet)	Water Level	Blow Count (blows/ft)	Water Content (percent)	Atterberg Limits (percent)
Moist, medium dense silt with sand and a trace of siltstone. [Qal]		- 0 2 4	•	6		•
Moist, medium dense silt with sand and a trace of siltstone and organic material. [Qvr]		6 8	∇	6		
Moist, medium dense silt with clay, sand, and a trace of organic material. [Qvr]		12 14	¥ 69/	10		
Moist, very stiff silt with sand and a trace of gravel. [Qvr]	T. D. 20'	16 18 — 20	6/16/69	52		